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PRELIMINARY FOUNDATION INVESTIGATION

Proposed Carrillo Plaza

210 West Carrillo Street

City of Santa Barbara, California

CLIENT
DBN Carrillo LLC
c/o Conceptual Motion Company
Attn: Dan Weber
1501 Chapala Street
Santa Barbara, CA 92653

February 15, 2006
Lab No: 67564-2
File No: 06-12339-2

TABLE OF CONTENTS

INTRODUCTION

This report presents the results of a preliminary foundation investigation performed at 210 West Carrillo Street in the City of Santa Barbara, California. Existing at the site are commercial buildings around a central parking lot. It is proposed to remove the existing development and build a new structure of both commercial and residential use. The structure will have a two-level subterranean basement under the entire area of the property.

SCOPE OF WORK

It is the purpose of this investigation to classify the soil disclosed by the exploratory probes. Correlations from the probes will be used to evaluate soil strength, the effect of moisture variation on the soil-bearing capacity, compressibility, liquefaction, and expansiveness. Based upon this information, we will provide preliminary foundation recommendations for the proposed commercial/residential complex.

The scope of this investigation does not include the analyses of the corrosive potential of the soil, previous site construction, or analyses of geologic structures and their associated features, such as faults, fractures, bedding planes, strike and dip angles, ancient landslides, potential for earth movement in undisturbed or natural soil formations sloped or level, or other sources of potential instability which relate to the geologic conditions, as these items should be addressed by a qualified Engineering Geologist.

This study is a soil engineering report. It is not a geology report as referenced in Section 3309.4 and 3309.6 of Chapter 33 of the Uniform Building Code (UBC). It is the intent of this report to comply with Section 3309.5 of Chapter 33 and Section 1804 of Chapter 18 of the UBC. This exploration was conducted in accordance with presently accepted geotechnical engineering procedures currently applied in the local community in order to provide the appropriate geotechnical design characteristics of the foundations soils in order to properly evaluate the proposed structure with respect to differential settlement based upon the anticipated soil characteristics at the time of construction.

LIMITATIONS

This Laboratory's basic assumption is that the subsurface probes and soil borings presented herein are representative of the entire footprint of the proposed development, however, no warranty is implied. If, during the course of construction, soil conditions are encountered which vary from those presented herein, please contact this Laboratory immediately so appropriate field modifications may be expeditiously proposed.

It is your responsibility to contact our office, providing at least 48 hours of notice for earthwork or footing excavation observations and testing. The observation of excavations during the construction phase represents an opportunity by our firm to either confirm soil conditions estimated by the exploratory borings or to discover soil conditions which have not

been addressed. When such undisclosed conditions are encountered, opinions and recommendations addressing these conditions will be rendered at that time.

This report is considered preliminary and no person should consider the recommendations or soil conditions described herein as conclusive. The recommendations and conclusions of this report are considered preliminary until all excavations have been observed during the construction phase, after which a final report will be issued stating that the grading and foundation works accomplished and installed are appropriate for the soil conditions encountered.

PREVIOUS STUDIES

A previous geotechnical feasibility study was performed at this site by Kennedy/Jenks Consultants (2005). The borings logs from the report were reviewed by Pacific Materials Laboratory (PML) during the planning of the current field exploration work and for corroboration of data. A copy of the boring logs from the Kennedy/Jenks Consultants report is provided in Appendix A.

In addition, the soil report provided for the construction of the Carrillo Hotel (aka Andalucia) at 31 West Carrillo Street was reviewed since the sites are one block apart and located in the same geologic formation. The report was provided by URS, dated October 11, 2000, and title "Geotechnical Investigation, Proposed Carrillo Hotel, Santa Barbara, California."

FIELD INVESTIGATION

The subsurface soil conditions were explored by three (3) Cone Penetration Test (CPT) soundings. The previous study drilled five (5) hollow stem auger borings to depths of up to 60 feet. The CPT soundings extended to depths of up to 60 feet. The locations of the soundings were selected as appropriate and representative. Laboratory tests and analyses of representative soil samples were not performed since no samples were retrieved by our firm. We were prohibited from obtaining samples because the soil is being studied to determine the extent of contamination. CPT soundings, which produce no soil samples, were used to estimate the engineering properties and determine the soil classification of earth materials encountered. The locations of the CPT soundings and exploratory borings are shown on Plate 1. The boring log data from the Kennedy/Jenks Consultants study are presented in Appendix A, "Field Investigation".

The CPT soundings were accomplished by placing a cylindrical cone tipped probe into the soil while simultaneously recording the resulting penetration resistance. The probe is attached to the end of a string of steel pipe segments, each 1 meter long, and pushed into the ground by means of heavy hydraulic rams, mounted inside the rear compartment of a three-axle truck. The weight of the truck provides the reaction force. Each downward stroke of the hydraulic ram pushes the string down one pipe length at a time, during which a constant penetration rate of 2 centimeters per second is maintained. A pause of a few seconds is

necessary after each stroke to add a new section of pipe and raise the rams for the next downward push. An electric cable, which is strung through all of the steel segments in advance, connects the CPT probe to a computer controlled data acquisition system located inside the CPT rig. The logs of the CPT soundings are contained in Appendix B, "Cone Penetration Tests".

SOIL CONDITIONS

1. The description of the soil conditions is based on visual classification of samples obtained during the field exploration performed by Kennedy/Jenks Consultants, a review of the soil report by URS (2000), for the Carrillo Hotel (Andalucia) at 31 West Carrillo Street, approximately one block to the east, and on correlations provided by the CPT probes. The surface and subsurface soil conditions encountered at the site generally consist of fanglomerate deposits overlain by alluvium. The alluvium consists of silty sand, sandy silts, and sandy clays deposited in association with stream flows and flooding along the ancient meandering Mission Creek. The alluvium is typically overlying a sandstone-cobble-boulder-filled fanglomerate. The fanglomerate is composed of gravel, cobbles, and boulders in a matrix of dense to dense sand (SP), silty sand (SM), silt (ML), or stiff to hard, lean and sandy lean clay (CL). Boulders may be encountered having a size of 2 to 3 feet in diameter or more; however, the frequency of boulders and cobbles in the fanglomerate may vary and the borings do not report having encountered rock layers other than the size of gravel. Layers of medium dense to dense sand, clay, sand, and silt, and stiff to very stiff sandy lean clay was encountered in the borings to depths of up to 60 feet. The dry unit weight of samples from the Carrillo Hotel site (URS) range from about 111 to 130 pounds per cubic foot (pcf) with an average value of about 122 pcf. Moisture contents typically range from about 10% to 29% as reported in the Kennedy/Jenks boring log data. From the CPT probes, soil strength properties indicate friction angles between 30 to 40 degrees and undrained shear strengths of 1.5 to 5 tsf.

2. Groundwater was encountered in the exploratory borings performed by Kennedy/Jenks Consultants. It should be recognized that water table elevations, even seasonal perched water tables, might fluctuate with time, being dependent upon seasonal precipitation, irrigation, land use, and climatic conditions, as well as other factors. Therefore, water level observations at the time of the field investigation may vary from those encountered during the construction phase of the project. The evaluation of such factors is beyond the scope of this report.

3. The depth to groundwater table (GWT) encountered in the borings of the previous study are tabulated on the following page:

Boring No.	Depth to GWT (2005) (ft.)	Approximate Bottom of GWT (ft.)
1	17	30
4	25	52
5	27	52
6	33	54
7	28	36

4. The supporting soils are estimated to have a very low potential for expansion.

5. The soil type per the Uniform Building Code Table 16-J is estimated to be S_D. The site is located in Seismic Zone 4 and is estimated to be within two kilometers of a Type B fault.

6. The potential for liquefaction is considered to be low since the soil below the two-level subterranean parking is a stiff clay.

PRELIMINARY CONCLUSIONS AND RECOMMENDATIONS

It is the opinion of this Laboratory the proposed construction is feasible from a soil-engineering perspective provided the recommendations contained in this soil engineering report are incorporated into the design and implemented during construction.

It is the understanding of this Laboratory the proposed structure will have a two-level subterranean parking garage and four levels above the exterior grade. A mat foundation is recommended due to the variable soil types anticipated to be encountered at the base of the two-level deep excavation. The soil types may vary from clay deposits to sand deposits under isolated columns, each having different strengths and consolidation properties, which would introduce differential settlements that can be mitigated utilizing a mat foundation. Based upon this understanding, we present the following preliminary recommendations:

EARTHWORK

General

The primary earthwork is estimated to be an excavation to a depth of approximately 25 feet for the proposed two-level subterranean parking structure. Geotechnical considerations for temporary excavations are presented in on Page 7 of this report.

Site Preparation

Site preparation will involve demolition and removal of existing structures at the site. Prior to site grading, any debris, vegetation, pavements, and remnants of the demolition work

shall be removed and disposed of outside the construction limits. All active or inactive utilities within the proposed building area should be relocated or abandoned. Any pipes to be abandoned in-place at the edge of the excavation shall be filled with sand-cement slurry after review of their location and approval by the Geotechnical Engineer.

Upon reaching the planned excavation level, saturated soil conditions are expected. It may be necessary to stabilize the exposed subgrade excavation with at least 12 inches of crushed rock (3-inch to 6-inch gabion rock). The rock layer should be placed on a separator fabric, such as the Mirafi 600X™, which has been spread over the exposed subgrade. A filter fabric, such as Mirafi 140N™, shall cover the rock before placing and compacting an final 8- to 12-inch layer of Class 2 aggregate base (AB). Use of the AB layer on top is intended to provide a firm-working platform above the potentially saturated subgrade. If sections of the exposed subgrade are stable, the AB layer may be placed on the stable, native soil subgrade which has been compacted to 95% relative compaction.

Fills and Backfill

Unless noted otherwise in this report, all fill and backfill should be processed as necessary to achieve a uniform moisture content, approximately 2% above optimum and compacted to at least 90% of the maximum dry density as determined by ASTM D-1557.

All fill and backfill imported to the site should be predominantly granular, less than 3 inches in any dimension, free of organic and inorganic debris, and have an expansion Index (EI) less than 20. All fill and backfill materials should be placed in horizontal lifts not exceeding 8 inches in thickness and compacted using mechanical compaction equipment. Flooding or jetting to achieve compaction shall not be allowed.

The Geotechnical Engineer shall approve all proposed fill materials prior to import to the site. Moreover, all fills shall be placed under the observation of the geotechnical representative and shall be tested to verify that the specified relative compaction and moisture content are being achieved.

FOUNDATION

A mat foundation, placed on a subgrade prepared in the manner recommended above, may be designed using an allowable bearing pressure of 6,000 psf. A modulus subgrade reaction of 60 pounds per cubic inch may be used. From a geotechnical standpoint, the mat foundation should be a minimum of 2 feet in thickness.

The above bearing values may increase by one-third for transient loading conditions, including wind or seismic loads. For seismic design, the ultimate bearing values may be calculated by multiplying the above bearing values by 2.

Settlement

On the basis of the allowable bearing value recommended above, a total settlement for the mat foundation of 1 inch is estimated with a differential settlement of approximately ¼ inch over a span of 25 feet.

Resistance to Lateral Loads

Lateral loads may be resisted by frictional resistance along the foundation base and passive earth pressures. An allowable coefficient of 0.35 may be used. The passive earth pressures of 200 psf/ft. of footing may be used. A triangular distribution should be used. The frictional resistance and the passive pressure may be combined without reduction. The resistance may be increased by one-third for wind or seismic loading.

Concrete Slab-on-Grade Floors

A concrete slab-on-grade floor or pavement may be used at the subterranean parking level if the subgrade soil is prepared per the Earthwork section of this document. Exterior slab floors for patios, walkways, and driveways may also be designed as concrete slab-on-grade floors where grading has been performed. The slab thickness and reinforcing for slab-on-grade construction should be designed using a modulus of subgrade reaction of 150 pci (pounds per cubic inch). From a geotechnical standpoint, the slab should have a minimum thickness of 4 inches, and contain No. 3 rebar spaced 24 inches on center each way. The steel reinforcement shall be placed near the center of the slab.

If moisture-sensitive flooring is to be used, the concrete slab should be underlain by an impermeable polyethylene membrane (10-mil visqueen), covered by a 4-inch layer of coarse clean sand. These concrete slab requirements shall be modified as needed by the designers for surcharge loads, wheel loads, concentrated loads, or for moisture control. The floor covering supplier or manufacturer should be contacted for their specifications for design features which will result in a successful bond between the concrete slab and floor covering. Floor flatness and shrinkage crack control must be addressed by a competent contractor experienced in the skill of concrete placement. The owners or their agents shall inform those designing, building, and installing the concrete slab on grade and flooring of the performance and aesthetics expected.

LATERAL EARTH PRESSURES

Basement walls, which are constructed directly against braced/tied back shoring, should be designed with lateral earth pressures (in psf) of 24H where H is the full height of the wall in feet. A rectangular distribution should be used.

When the walls are constructed so backfill is placed and compacted behind the wall, they should be designed to resist active earth pressures of 36 psf/ft and 55 psf/ft for cantilevered and restrained conditions, respectively. A triangular pressure distribution should be used. Where hydrostatic pressure is not removed by drains, the walls should be designed

to resist a total pressure of 80 psf/ft and 90 psf/ft for cantilevered and restrained conditions respectively.

For seismic conditions, unrestrained and basement walls should be designed to resist an additional earth pressure of 21 psf/ft applied as an inverted triangle.

If possible, drainage, as shown on Plate 2, should be provided behind the wall. The drainpipe shown on Plate 2 should be connected to a sump pump. Alternatively, Schematic Basement Wall Drainage shown on Plate 3 should be used. Because of the high groundwater table, the pump may run continuously and would need a back-up electrical generator for power failures in order to maintain constant protection of a drainage system for the wall. The alternative is to eliminate the drain system and provide a watertight basement. In such a case, lateral and uplift pressures from water (62.4 pcf) shall be applied to the structure.

Surcharge pressures (dead and live) should be added to the lateral pressures where such loads may occur adjacent to the wall. These loads should be applied as a uniform (rectangular) pressure distribution with a lateral earth pressure coefficient of 0.3 for a uniform vertical surcharge behind the full height of the wall. Surcharges which are set back, behind the wall, a horizontal distance greater than the exposed wall height need not be added to the design pressures.

SEISMIC DESIGN PARAMETERS

Recommendations for seismic design parameters were established based on guidelines presented in the 1997 Uniform Building Code (UBC-97).

The soil profile, based on the CPT data, corresponds to a site profile type S_D in accordance with Table No. 16-J of the UBC-97. The site is located in Seismic Zone 4. According to the local geologic map prepared by Dibblee (1986), the site is located approximately 0.6-km from the Mesa fault and approved 2.4-km from the Mission Ridge-Arroyo Parida fault. A seismic source Type B should be used for the site when selecting a near source factor from Tables 16-S and 16-T of the 1997 UBC. Based on our review of the available geotechnical and geological data, the seismic parameters for the site can be obtained from the UBC-97 using on the values presented in the table on the following page:

SEISMIC PARAMETERS	
Site Soil Profile Type	S_D
Fault Type	B
Distance to Fault	0.6-km
Seismic Zone	4

SITE DRAINAGE

For the proposed development, drainage of surface runoff water should be provided during the construction. Provisions should be made to divert surface water away from open

excavations and slopes. Any water that collects in open excavations should be immediately pumped out to minimize softening of foundation soils.

Adequate measures should be provided to collect and drain storm water around the proposed project. It is recommended that areas surrounding the site be provided with positive drainage away from the structure in order to prevent ponding and to minimize water infiltration into the soils below the structure. Any pavement cracks should be repaired immediately to prevent water infiltration through the cracks.

CONSTRUCTION CONSIDERATIONS

DEMOLITION

Prior to construction, any demolition of various existing facilities will be necessary. The demolition operations should be observed and documented by the Project Geotechnical Engineer. Documentation should include the limits and extent of cavities created by such operations. Soils disturbed by the demolition operations should be removed.

Voids created by demolition activities should be backfilled with properly conditioned and compacted fill. All backfill should be compacted to 90% of the ASTM D-1557 laboratory maximum dry density. Placement of all fill and backfill should be observed and tested by the Project Geotechnical Engineer.

TEMPORARY EXCAVATIONS

In general, temporary unsupported vertical cuts without a surcharge should be limited to a height of 5 feet. In the area where adjacent buildings or streets border the site, unsupported excavations should not encroach below a zone bounded by a 1.5 to 1 (horizontal to vertical) projection downward from the top of the adjacent street curb or the top of the lowest adjacent grade next to existing foundations of neighboring buildings. The geotechnical representative should observe excavations in the field; observations may result in flatter or shorter slope requirements. The excavation may be subject to City or State requirements.

Difficult excavation conditions may occur in the layer containing groundwater and perched groundwater. Sloughing and caving is expected if the GWT is not lowered.

Based on the groundwater levels observed in the borings, we expect saturated soil conditions beginning at about the depth of 17 feet and at the bottom of the proposed excavation. As such, the contractor should be prepared to design and implement dewatering measures. An experienced dewatering contractor should be consulted. This document presents additional discussion on groundwater issues affecting construction on Page 10.

Surface drainage should be controlled along the top of the temporary excavations to prevent excessive wetting and erosion of excavation faces.

Where there is insufficient space for sloped excavations or unsafe conditions are expected, shoring should be used to support the excavation.

ADJACENT FOOTINGS AND UNDERPINNING

Immediately adjacent to all four sides of the proposed building are existing foundations of adjacent structures and streets which need to be shored or underpinned. Alternatively, the loads from the adjacent foundations should be incorporated into the design of the shoring/basement walls for the subterranean portions of the project. When particulars of the adjacent buildings foundation system are available, and the scheme for supporting the adjacent footings has been developed, additional geotechnical recommendations may be required.

If an underpinning program is selected, it should be submitted for review by the Geotechnical Engineer prior to the excavation.

TEMPROARY SHORING

Temporary Lateral Earth Pressures

All shoring systems should be designed and constructed in accordance with applicable requirements and regulations of the City or State agencies.

Settlement of structures/utilities adjacent to the shoring will occur in proportion to both the distance between the shoring and the structure, and the amount of horizontal deflection of the shoring system. Settlement will be largest at the shoring, decreasing as the distance from the shoring increases. At a distance from the shoring equal to the height of the shoring, settlement is expected to be negligible. The maximum vertical settlement is expected to be about 75% of the horizontal deflection of the shoring system. It is recommended that shoring be designed and constructed to limit the maximum horizontal deflection to 0.5 inch where structure/utilities are to be supported.

Lateral earth pressures for design of temporary shoring recommended in this report are based on the following assumptions:

- The shored earth is level at the surface.
- The exposed height of shoring is no greater than 30 feet.
- There will be no hydrostatic pressures above the bottom of excavation.
- The shoring system is temporary in nature and will not be required to support the earth for longer than 6 months.

If deflections are acceptable for shoring heights of up to 15 feet, cantilevered shoring may be used. For cantilevered shoring, a triangular distribution of lateral earth pressure equivalent to a fluid pressure of 36 psf/ft should be used.

Shoring may be supported laterally by tieback anchors or by bracing internally with rakers. The recommended lateral earth pressures (in psf) for design of braced shoring should

be 24H where H is the full height of the braced shoring member in feet. A rectangular distribution should be used.

Temporary surcharge loads may be neglected for shoring design if the load is set back from top of temporary excavations a horizontal distance equal to at least the depth of the excavation. Otherwise, 40% of the surcharge load, including traffic loading, should be added to the lateral earth pressure as a horizontal uniform pressure.

Soldier Piles and Lagging

The shoring should consist of steel soldier piles placed in drilled holes backfilled with concrete. For the design of soldier piles spaced at least two diameters on center, the allowable lateral bearing value (passive value) of the soils below the lowest adjacent excavated level may be assumed to be 600 psf per foot of depth, up to a maximum of 6,000 psf per foot of depth. Passive resistance should be discounted to a depth of at least one pile diameter below the lowest adjacent excavation level.

The soldier piles should be concreted to assure firm contact between the soldier pile and the supporting soils. For portions of the soldier pile which fall below the planned excavation, structural concrete should be used. For portions above the planned excavation, lean mix concrete is sufficient.

Continuous lagging will be required between the soldier piles. The soil layers containing a GWT will have a propensity to slough/cave. As such, slurry may be required behind the lagging. The lagging should be designed for a maximum value of 350 psf. The gap between the earth excavation and the lagging shall be filled with either ⅜- to ¾-inch gravel or with slurry.

Tiebacks

Tiebacks may be installed at angles ranging fro 15 to 30 degrees (measured from horizontal). For design purposes, the resisting or anchor portion of the tieback should be in soils outside the active wedge behind the proposed shoring. The active wedge in this case is the zone of soil between the shoring and an imaginary plane tilted from the vertical 30 degrees, starting at the base of the excavation (see Plate 4).

For tiebacks concreted into the surrounding soil behind the active wedge, soil resistance may be calculated using the expression:

$$q\text{-}46H$$

Where

q is the friction capacity in psf and should not exceed 600 psf
H is average depth of anchor below ground surface in feet (defined on Plate 4)
The tiebacks should be spaced at least 3 diameters apart (center to center).
A factor of safety of at least 1.5 should be applied to calculated friction capacity

The tiebacks should be designed and installed as per the latest Post-Tension Institute Guidelines. Caving and sloughing of tieback anchor holes (particularly through the saturated soil layers) should be anticipated. Measures should be taken to prevent caving during drilling. After completion of drilling and placement of steel, and structural concrete in the bonded length portion of the tieback, caving in the free length portion should be prevented until the anchors have been tested and "locked off" at the design load. This may be performed by suitable means, such as use of pumped sand.

The contractor should submit for review by the Geotechnical Engineer installation procedures and equipment calibrations, etc. Prior to installation of production tiebacks, it is recommended that test tiebacks should be installed and tested to confirm preliminary design values. After installation, each row of anchors should be tested and approved before excavation proceeds. The Geotechnical Engineer's representative should observe and approve all tieback tests.

Internal Bracing

If tiebacks are not permitted (due to easement issues), internal raker bracing may be used for lateral support of the soldier piles. The rakers are supported by "dead-man" footings constructed below the bottom of the planned excavation level. In order to increase the mobilized bearing value, the bearing surface of these footings should be inclined at a minimum angle of 45 degrees (measured from horizontal). A bearing value of 2,000 psf may be used provided the shallowest point of the footing is at least 12 inches below the lowest adjacent grade. Water may be encountered in the footing excavations; in such an event, the water should be removed and the steel and concrete be placed on a firm surface.

The raker members should be preloaded between the soldier piles and the footings to reduce the shoring's deflections during the excavation.

GROUNDWATER / DEWATERING

Groundwater was encountered during the field exploration program (water levels are discussed on Page 3 of this report). As such, the need of dewatering is anticipated. Water, when encountered in the excavation, should be removed using a suitable dewatering system.

A stockpile of 3- to 6-inch gabion rock material (approximately 10 to 20 cubic yards) should be available when excavating near the property line in case a caving side wall or a boiling subgrade condition develops. In such a case, the rock must be placed on the caving excavation or the boiling subgrade until stabilization results.

PRE-CONSTRUCTION SURVEY

Prior to any site work and excavations, conditions of existing structures and improvements should be surveyed and photo-video documented. A survey of all adjacent structures which are within a distance equal to two times the height of the excavations (or

shoring) should be prepared prior to excavation or installation of the shoring and monitored during excavations.

PLAN REVIEW AND CONSTRUCTION MONITORING

We suggest that the geotechnical aspects of the project be reviewed by PML during the planning process. The scope of our services may include assistance to the design team in providing specific recommendations for special cases, reviewing the grading and foundation plans, and evaluating the overall application of our recommendations.

All earthwork during construction should be monitored by a representative from our office and a grading inspector. Our monitoring will include:

- Site preparation – site stripping and over-excavation of existing poor quality materials;
- All foundation excavations; and
- Placement of all compacted fill and backfill.

A representative of PML should be present to observe the soil conditions encountered during construction to verify the applicability of the recommendations presented in this report to the soil conditions encountered, and to recommend any appropriate changes in our recommendations if conditions differ from those described herein.

CLOSURE

The recommendations contained herein are for the sole use of our client and are based upon this Laboratory's understanding of the project which has been described herein. If the project scope, location, or conceptual design is subsequently altered, this Laboratory shall be requested to modify, as necessary, the recommendations contained herein as is appropriate for the new development concept. If the recommendations of this report are not implemented within one year, we recommend an update and review of the contents of this report be performed by this Laboratory.

The recommendations contained herein are based upon the assumption that PML shall be requested to perform the testing and observation services which will be required during the grading and foundation operations in order to verify that the actual soil conditions encountered and the construction procedures are consistent with the recommendations contained herein. If this service is performed by others, only the technical correctness of the actual analytical soil tests described here is attested to by this Laboratory.

Thank you for the opportunity of providing this service. If you have any questions regarding this matter, please do not hesitate to call.

Respectfully submitted,

PACIFIC MATERIALS LABORATORY, INC.

Ronald J. Pike
Geotechnical Engineer, G. E. 2291

RJP:cm

cc: Addressee (3)

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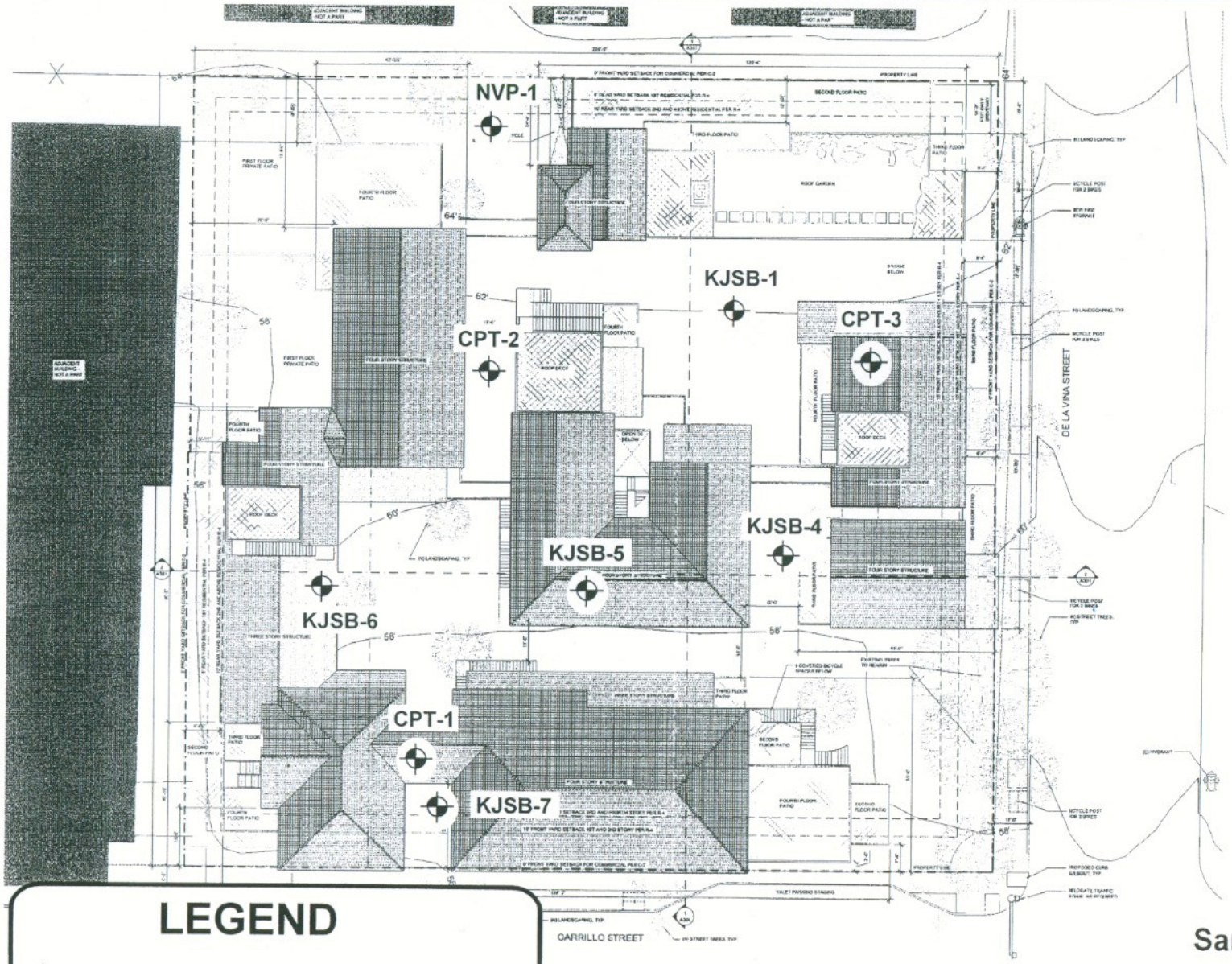


SITE PLAN

Carrillo Plaza
210 West Carrillo
Santa Barbara, California

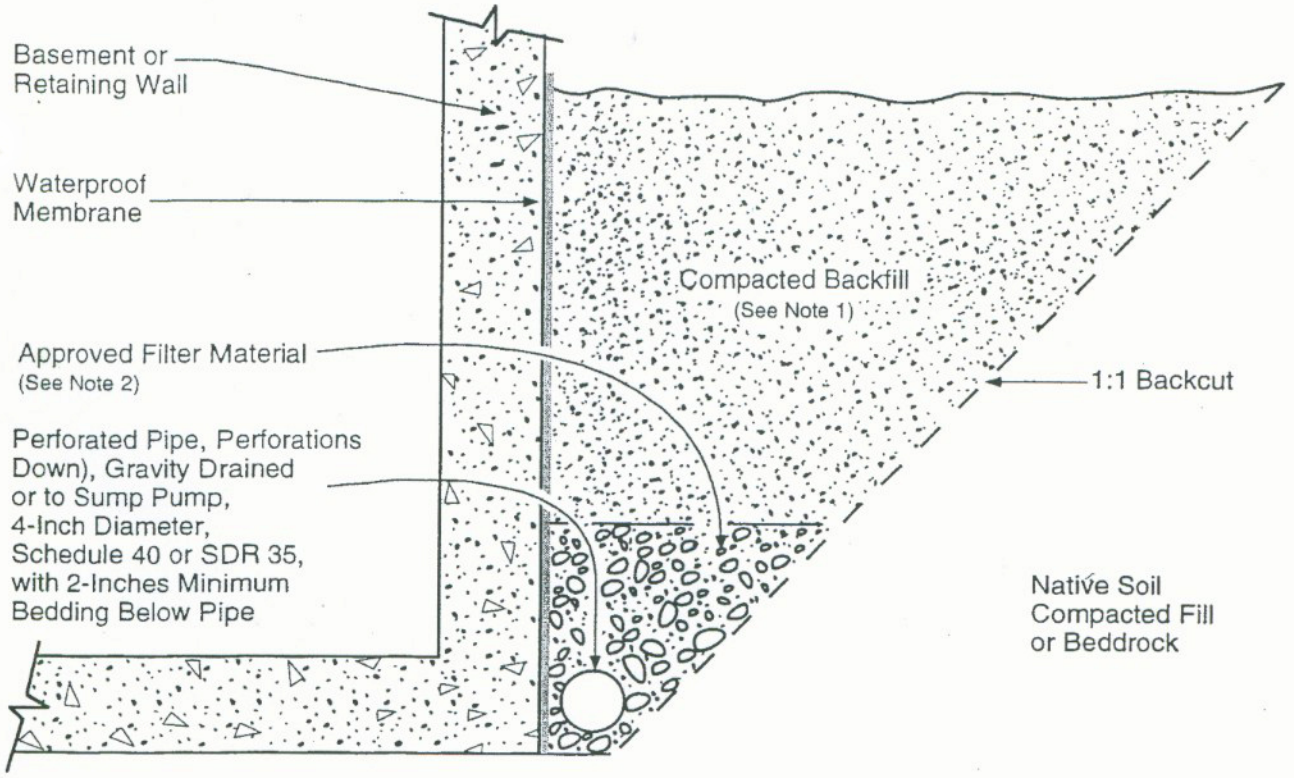
LEGEND

- NVP-1 – BORING LOCATION
- KJSB-1 – BORING LOCATION
- CPT-1 – CONE PENETROMETER TEST LOCATION

Scale: none

Plate 1
Lab No: 67564-2
File No: 06-12339-2
February 15, 2006

Pacific Materials Laboratory, Inc.



Notes:

1. Compacted Backfill May be Either Select Sand or Gravel (See Later Earth Pressure Section in Text).

2. A 3/4-Inch Crushed Rock.

Schematic Only
Not-to-Scale

TYPICAL PERIMETER DRAIN DETAIL

Scale: none	**Plate 2** **Lab No: 67564-2** **File No: 06-12339-2** **February 15, 2006**

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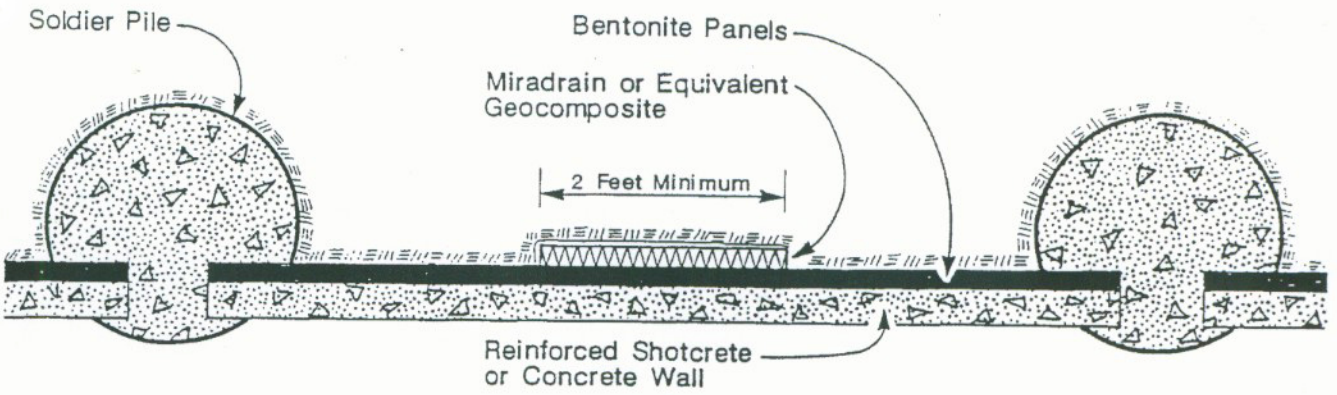
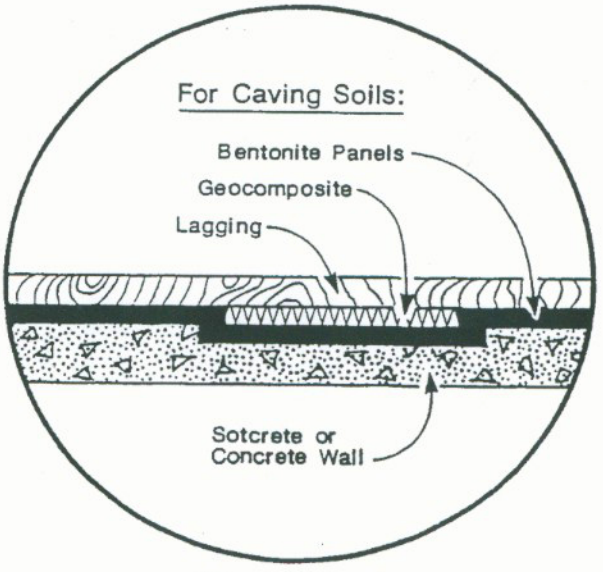
Supported Soils



Basement Excavation



Optional

SCHEMATIC BASEMENT WALL DRAINAGE

Scale: none	Plate 3 Lab No: 67564-2 File No: 06-12339-2 February 15, 2006

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APPENDIX A

FIELD INVESTIGATION

February 15, 2006

Lab No: 67564-2

File No: 06-12339-2

Pacific Materials Laboratory of Santa Barbara, Inc.

Boring Log

Kennedy/Jenks Consultants

BORING LOCATION	NW corner inside Norvell Dry Cleaners
DRILLING COMPANY	Gregg Drilling & Testing
DRILLER	Santiago
DRILLING METHOD(S)	Direct Push
DRILL BIT(S) SIZE	2-in
ISOLATION CASING	n/a
FROM / TO	n/a / n/a FT.
BLANK CASING	n/a
FROM / TO	n/a / n/a FT.
SLOTTED CASING	n/a
FROM / TO	n/a / n/a FT.
SIZE AND TYPE OF FILTER PACK	n/a
FROM / TO	n/a / n/a FT.
SEAL	n/a
FROM / TO	n/a / n/a FT.
GROUT	n/a
FROM / TO	n/a / n/a FT.

Boring Name	NVP-1
Project Name	SIMA-Carrillo Plaza
Project Number	0583006
ELEVATION AND DATUM	TOTAL DEPTH: 25.0 ft. bgs
DATE STARTED: 10/3/05	DATE COMPLETED: 10/3/05
STATIC WATER ELEVATION: n/a	
LOGGED BY: N. Stroud	
SAMPLING METHODS: Direct Push	WELL COMPLETION: ☐ SURFACE HOUSING ☐ STAND PIPE n/a FT.

SAMPLES Type & No.	Recovery (Feet)	Penetr. Resist. Blows/6"	Drill Depth (Feet)	BACKFILL DETAILS	USCS Log	Lithology	Color	SAMPLE DESCRIPTION and DRILLING REMARKS
								CONCRETE APPROXIMATE 6-INCH THICK CONCRETE SURFACE. HAND AUGER PROBE HOLE TO APPROXIMATELY 5 FEET BGS.
	5				ML		10YR 4/4	**SANDY SILT (ML)** DARK YELLOWISH BROWN, FINE-GRAINED SAND, FIRM, MOIST
					CL		10YR 4/4	**SANDY CLAY (CL)** DARK YELLOWISH BROWN, FINE-GRAINED SAND, FIRM, MEDIUM PLASTIC, MOIST
					ML		10YR 4/4	
x			5	PID = 4.1 PPM	CL		7.5YR 4/4	**CLAYEY SANDY SILT (ML)** DARK YELLOWISH BROWN, FINE-GRAINED SAND, FIRM, LOW PLASTIC, MOIST
x	4			PID = 70 PPM				
				PID = 55 PPM	SM		10YR 4/6	**SANDY CLAY WITH SILT (CL)** BROWN, FINE-GRAINED SAND, STIFF, MEDIUM TO HIGH PLASTIC, MOIST
x				PID = 271 PPM	CL		7.5YR 4/4	
				PID = 21.2 PPM	ML		10YR 4/6	**SILTY SAND (SM)** DARK YELLOWISH BROWN, FINE-GRAINED, LOOSE TO MEDIUM DENSE, SATURATED
	2		10	PID = 6.6 PPM				**SANDY CLAY WITH SILT (CL)** DARK YELLOWISH BROWN, FINE-GRAINED SAND, STIFF, MEDIUM TO HIGH PLASTIC, MOIST
x					SM		10YR 5/6	**CLAYEY SANDY SILT (ML)** DARK YELLOWISH BROWN, FINE-GRAINED SAND, FIRM TO STIFF, MEDIUM PLASTIC, MOIST
								INCREASE IN SAND WITH DEPTH
	1.2			PID = 50.7 PPM	CL		10YR 4/4	**SILTY SAND (SM)** YELLOWISH BROWN, FINE-GRAINED, MEDIUM DENSE, MOIST
				PID = 29.6 PPM				**CLAY (CL)** DARK YELLOWISH BROWN, FIRM, HIGH PLASTIC, MOIST
			15		SM		10YR 4/6	**SILTY SAND (SM)** DARK YELLOWISH BROWN, FINE-GRAINED, MEDIUM DENSE, MOIST, INCREASING SILT CONTENT WITH DEPTH
x	1			PID = 0 PPM				
					ML		10YR 7/3	**SILTSTONE (ML)** VERY PALE BROWN, VERY STIFF, DRY
			20					
x	1.5			PID = 1.9 PPM	ML		10YR 4/4	**SANDY SILT WITH CLAY (ML)** DARK YELLOWISH BROWN, FINE-GRAINED SAND, SOFT TO FIRM, MEDIUM TO HIGH PLASTIC, VERY MOIST, TRACE MICA
					SM		10YR 4/6	**SILTY SAND (SM)** DARK YELLOWISH BROWN, FINE-GRAINED, DENSE, MOIST
			25					TOTAL DEPTH = 25 FEET

BORING & WELL CONSTRUCTION CARRILLO NVP1.GPJ KENNEDY JENKS.GDT 10/31/05

F-40.1
(6-87) (3-88) (8-90)

Boring Log

Kennedy/Jenks Consultants

BORING LOCATION	Northeast Corner of Parking lot
DRILLING COMPANY	Vironex
DRILLER	Bruce
DRILLING METHOD(S)	Direct Push
DRILL BIT(S) SIZE	2"
ISOLATION CASING	n/a FROM n/a TO n/a FT.
BLANK CASING	n/a FROM n/a TO n/a FT.
SLOTTED CASING	n/a FROM n/a TO n/a FT.
SIZE AND TYPE OF FILTER PACK	n/a FROM n/a TO n/a FT.
SEAL	n/a FROM n/a TO n/a FT.
GROUT	n/a FROM n/a TO n/a FT.

Boring Name	KJSB-1
Project Name	Carrillo Plaza
Project Number	0583006
ELEVATION AND DATUM	Not Surveyed
TOTAL DEPTH	55.0 ft. bgs
DATE STARTED	10/20/05
DATE COMPLETED	10/20/05
STATIC WATER ELEVATION	n/a
LOGGED BY	Jay Knight
SAMPLING METHODS	
WELL COMPLETION	☐ SURFACE HOUSING ☐ STAND PIPE n/a FT.

SAMPLES Type & No.	Recovery (Feet)	Penetr. Resist. Blows/6"	Drill Depth (Feet)	BACKFILL DETAILS	USCS Log	Lithology	Color	SAMPLE DESCRIPTION and DRILLING REMARKS
	5		0		SC		7.5YR 4/6	ASPHALT, 2" CLAYEY SAND (SC) STRONG BROWN, FINE, SLIGHTLY MOIST, MEDIUM DENSE
	.5		5		CL		7.5YR 4/4	SILTY CLAY (CL) BROWN, SLIGHTLY MOIST, VERY STIFF
x	2.5		10		SP		10YR 5/6	SAND (SP) YELLOWISH BROWN, FINE, MOIST, MEDIUM DENSE
x	3		15	Water at 17' ▽	SM		10YR 4/4	SILTY SAND (SM) DARK YELLOWISH BROWN, FINE, MOIST, DENSE, WET
x	2.5		20				7.5YR 5/6	STRONG BROWN, WITH LENSES OF GRAVELLY SAND
			25					
			30					

BORING & WELL CONSTRUCTION CARRILLO.GPJ KENNEDY JENKS.GDT 10/27/05

F-40.1
(6-87) (3-88) (8-90)

Boring Log

Kennedy/Jenks Consultants

Project Name: Carrillo Plaza | Project Number: 0583006 | Boring Name: KJSB-1

SAMPLES Type & No.	SAMPLES Recovery (Feet)	SAMPLES Penetr. Resist. Blows/6"	Drill Depth (Feet)	BACKFILL DETAILS	USCS Log	Lithology	Color	SAMPLE DESCRIPTION and DRILLING REMARKS
x	3.5				ML		10YR 5/4	**CLAYEY SILT (ML)** YELLOWISH BROWN, WET, MEDIUM STIFF INTERBEDDED WITH LENSES OF SAND AND GRAVELLY SAND
x	2.5		35					
x	3		40					
	2		45		SM		10YR 4/4	**SILTY SAND (SM)** DARK YELLOWISH BROWN, FINE, SLIGHTLY MOIST, MEDIUM DENSE, ORGANICS WITH LENSES OF GRAVELLY SAND
x	2		50		ML		10YR 7/1 10YR 5/6	**CLAYEY SILT (ML)** LIGHT GRAY TO YELLOWISH BROWN, MOTTLED, MOIST, VERY STIFF
					SM		10YR 4/4	**SILTY SAND (SM)** DARK YELLOWISH BROWN, FINE, SLIGHTLY MOIST, MEDIUM DENSE, ORGANICS WITH LENSES OF GRAVELLY SAND
			55					TOTAL DEPTH = 55 FEET

BORING & WELL CONSTRUCTION CARRILLO.GPJ KENNEDY JENKS.GDT 10/27/05

F-40.1
(6-87) (3-88) (8-90)

SHEET 2 OF 2

Boring Log

Kennedy/Jenks Consultants

BORING LOCATION	Northwest Center of Parking lot	Boring Name	KJSB-4
DRILLING COMPANY	Vironex	DRILLER: Bruce	Project Name: Carrillo Plaza
DRILLING METHOD(S)	Direct Push	DRILL BIT(S) SIZE: 2"	Project Number: 0583006
ISOLATION CASING	n/a	FROM n/a TO n/a FT.	ELEVATION AND DATUM: Not Surveyed; TOTAL DEPTH: 55.0 ft. bgs
BLANK CASING	n/a	FROM n/a TO n/a FT.	DATE STARTED: 10/21/05; DATE COMPLETED: 10/21/05
SLOTTED CASING	n/a	FROM n/a TO n/a FT.	STATIC WATER ELEVATION: n/a
SIZE AND TYPE OF FILTER PACK	n/a	FROM n/a TO n/a FT.	LOGGED BY: Matt Padberg
SEAL	n/a	FROM n/a TO n/a FT.	SAMPLING METHODS; WELL COMPLETION: ☐ SURFACE HOUSING ☐ STAND PIPE n/a FT.
GROUT	n/a	FROM n/a TO n/a FT.	

SAMPLES Type & No.	Recovery (Feet)	Penetr. Resist. Blows/6"	Drill Depth (Feet)	BACKFILL DETAILS	USCS Log	Lithology	Color	SAMPLE DESCRIPTION and DRILLING REMARKS
	5		0					ASPHALT, 2"
								SILTY SAND (SM) DARK YELLOWISH BROWN, FINE, DRY, DENSE
			5					GRADED BEDDING
x	4				SM		10YR 4/4	SLIGHTLY MOIST
	2.5		10					SOME ORGANICS
			15					
x	2.5				SP		10YR 4/4	**GRAVELLY SAND (SP)** DARK YELLOWISH BROWN, FINE TO MEDIUM, SLIGHTLY MOIST, DENSE, WEATHERED
			20		SM		10YR 4/4	**SILTY SAND (SM)** DARK YELLOWISH BROWN, FINE, SLIGHTLY MOIST, MEDIUM DENSE
	3.5				SP		10YR 6/6	**GRAVELLY SAND (SP)** BROWNISH YELLOW, FINE TO COARSE, DRY, DENSE
x	2		25	Water at 25.5' ▽	CL		10YR 4/4	**SANDY CLAY (CL)** DARK YELLOWISH BROWN, FINE TO MEDIUM SAND, WET, STIFF
			30					

BORING & WELL CONSTRUCTION CARRILLO.GPJ KENNEDY JENKS.GDT 10/27/05

F-40.1
(6-87) (3-88) (8-90)

Boring Log

Kennedy/Jenks Consultants

Project Name: Carrillo Plaza | Project Number: 0583006 | Boring Name: KJSB-4

SAMPLES Type & No.	SAMPLES Recovery (Feet)	SAMPLES Penetr. Resist. Blows/6"	Drill Depth (Feet)	BACKFILL DETAILS	USCS Log	Lithology	Color	SAMPLE DESCRIPTION and DRILLING REMARKS
x	4				CL		10YR 4/4	**SANDY CLAY (CL)** DARK YELLOWISH BROWN, FINE TO MEDIUM SAND, WET, STIFF, continued INTERBEDDED WITH CLAYEY SAND AND SILTY CLAY
			35					
	2.5				SP		10YR 4/4	**GRAVELLY SAND (SP)** DARK YELLOWISH BROWN, FINE TO MEDIUM SAND, WET, MEDIUM DENSE
x								
					CL			**SILTY CLAY (CL)** BROWNISH YELLOW TO LIGHT BROWNISH GRAY, MOTTLED, SOME ORGANIC MATERIAL, WET, STIFF
			40					
x	4							WITH GRAVEL LENSES, FINE TO MEDIUM SAND LENSES
			45				10YR 6/8 10YR 6/2	
	3							
			50					
	3.5							
x								
			55		SM		7.5YR 4/1	**SILTY SAND (SM)** DARK GRAY, FINE TO MEDIUM, TRACE OF COARSE SAND, MOIST, DENSE

TOTAL DEPTH = 55 FEET

BORING & WELL CONSTRUCTION CARRILLO.GPJ KENNEDY JENKS.GDT 10/27/05

F-40.1
(6-87) (3-88) (8-90)

Boring Log

Kennedy/Jenks Consultants

BORING LOCATION	Middle of Parking lot		
DRILLING COMPANY	Vironex	DRILLER	Brandon
DRILLING METHOD(S)	Direct Push	DRILL BIT(S) SIZE	2"
ISOLATION CASING	n/a	FROM n/a TO n/a FT.	
BLANK CASING	n/a	FROM n/a TO n/a FT.	
SLOTTED CASING	n/a	FROM n/a TO n/a FT.	
SIZE AND TYPE OF FILTER PACK	n/a	FROM n/a TO n/a FT.	
SEAL	n/a	FROM n/a TO n/a FT.	
GROUT	n/a	FROM n/a TO n/a FT.	

Boring Name	KJSB-5
Project Name	Carrillo Plaza
Project Number	0583006
ELEVATION AND DATUM: Not Surveyed	TOTAL DEPTH: 60.0 ft. bgs
DATE STARTED: 10/21/05	DATE COMPLETED: 10/21/05
STATIC WATER ELEVATION: n/a	
LOGGED BY: Jay Knight	
SAMPLING METHODS	WELL COMPLETION: ☐ SURFACE HOUSING ☐ STAND PIPE n/a FT.

SAMPLES Type & No.	Recovery (Feet)	Penetr. Resist. Blows/6"	Drill Depth (Feet)	BACKFILL DETAILS	USCS Log	Lithology	Color	SAMPLE DESCRIPTION and DRILLING REMARKS
	5		0					ASPHALT, 2"
					ML		10YR 5/4	SANDY SILT (ML) YELLOWISH BROWN, FINE SAND, DRY, VERY STIFF
x	4		5					
					SM		10YR 6/6	SILTY SAND (SM) BROWNISH YELLOW, FINE, DRY, MEDIUM DENSE
	4		10					
x								
			15		SP		10YR 5/6	GRAVELLY SAND (SP) YELLOWISH BROWN, FINE TO MEDIUM, TRACE OF COARSE, GRAVEL UP TO 1", SLIGHTLY MOIST, MEDIUM DENSE
	4							
			20					
	4				SM		10YR 5/6	SILTY SAND (SM) YELLOWISH BROWN, FINE TO MEDIUM, SLIGHTLY MOIST, MEDIUM DENSE
					ML		10YR 5/6	SANDY SILT (ML) YELLOWISH BROWN, FINE, MOIST, VERY STIFF
x			25		SP		10YR 5/6	GRAVELLY SAND (SP) YELLOWISH BROWN, FINE TO COARSE, SLIGHTLY MOIST, DENSE
	3			Water at 27' ▽				
					CL		10YR 4/4	SANDY CLAY (CL) DARK YELLOWISH BROWN, FINE SAND, WET, STIFF
			30					

BORING & WELL CONSTRUCTION CARRILLO.GPJ KENNEDY JENKS.GDT 10/30/05

F-40.1
(6-87) (3-88) (8-90)

Boring Log

Kennedy/Jenks Consultants

Project Name: Carrillo Plaza Project Number: 0583006 Boring Name: KJSB-5

SAMPLES Type & No.	Recovery (Feet)	Penetr. Resist. Blows/6"	Drill Depth (Feet)	BACKFILL DETAILS	USCS Log	Lithology	Color	SAMPLE DESCRIPTION and DRILLING REMARKS
	4		35		CL		10YR 4/4	**SANDY CLAY (CL)** DARK YELLOWISH BROWN, FINE SAND, WET, STIFF, continued INTERBEDDED WITH CLAYEY SAND AND SILTY CLAY
x	5		40		SC		10YR 5/4	**CLAYEY SAND (SC)** YELLOWISH BROWN, FINE TO MEDIUM, SOME COARSE SAND AND GRAVELLY LENSES, WET, DENSE
x	4		45					WITH CLAY LENSES, LITTLE OR NO GRAVEL
	4		50		ML		10YR 4/4	**SANDY SILT (ML)** DARK YELLOWISH BROWN, WITH CLAY LENSES, WET, VERY STIFF
	3.5		55		SC		7.5YR 4/6	**CLAYEY SAND (SC)** STRONG BROWN, FINE TO MEDIUM, WET, DENSE
					CL		10YR 5/6 10YR 6/2	**CLAY (CL)** YELLOWISH BROWN TO LIGHT BROWNISH GRAY, MOTTLED, MOIST, VERY STIFF
	3				SM		10YR 4/4	**SILTY SAND (SM)** DARK YELLOWISH BROWN, FINE, MOIST, DENSE
x			60		SP		10YR 6/6	**SAND (SP)** BROWNISH YELLOW, FINE TO MEDIUM, MOIST, DENSE

TOTAL DEPTH = 60 FEET

BORING & WELL CONSTRUCTION CARRILLO.GPJ KENNEDY JENKS.GDT 10/30/05

F-40.1
(6-87) (3-88) (8-90)

SHEET 2 OF 2

Boring Log

Kennedy/Jenks Consultants

BORING LOCATION	West Side of Parking lot
DRILLING COMPANY	Vironex
DRILLER	Bruce
DRILLING METHOD(S)	Direct Push
DRILL BIT(S) SIZE	2"
ISOLATION CASING	n/a
FROM / TO / FT.	n/a / n/a
BLANK CASING	n/a
FROM / TO / FT.	n/a / n/a
SLOTTED CASING	n/a
FROM / TO / FT.	n/a / n/a
SIZE AND TYPE OF FILTER PACK	n/a
FROM / TO / FT.	n/a / n/a
SEAL	n/a
FROM / TO / FT.	n/a / n/a
GROUT	n/a
FROM / TO / FT.	n/a / n/a

Boring Name	KJSB-6
Project Name	Carrillo Plaza
Project Number	0583006
ELEVATION AND DATUM	Not Surveyed
TOTAL DEPTH	54.0 ft. bgs
DATE STARTED	10/20/05
DATE COMPLETED	10/20/05
STATIC WATER ELEVATION	n/a
LOGGED BY	Jay Knight
SAMPLING METHODS	
WELL COMPLETION	☐ SURFACE HOUSING ☐ STAND PIPE n/a FT.

SAMPLES Type & No.	Recovery (Feet)	Penetr. Resist. Blows/6"	Drill Depth (Feet)	BACKFILL DETAILS	USCS Log	Lithology	Color	SAMPLE DESCRIPTION and DRILLING REMARKS
	1							ASPHALT, 2"
	1.5				ML		10YR 4/4	SANDY SILT (ML) DARK YELLOWISH BROWN, FINE SAND, MOIST, MEDIUM STIFF
	1.5		5		SM		10YR 6/4	SILTY SAND (SM) LIGHT YELLOWISH BROWN, FINE, DRY, MEDIUM DENSE
x	1				SC		7.5YR 4/4	CLAYEY SAND (SC) BROWN, FINE TO MEDIUM, SLIGHTLY MOIST, DENSE
	1							MOTTLED
	1		10		SP		10YR 7/6	SAND (SP) YELLOW, FINE, DRY, MEDIUM DENSE
	.6				SC		10YR 4/4	CLAYEY SAND WITH GRAVEL (SC) DARK YELLOWISH BROWN, FINE TO MEDIUM, GRAVEL UP TO 1/2", SLIGHTLY MOIST, DENSE, GRAVEL WEATHERED
x	1		15		CL		10YR 3/6	SILTY CLAY (CL) DARK YELLOWISH BROWN, MOIST, VERY STIFF
	1							LENSES OF GRAY CLAYEY SAND
	.75							
x	1		20					1" ORGANIC LENSE WITH FINE GRAVEL
	1.25				ML		7.5YR 4/4	SANDY SILT (ML) BROWN, FINE SAND, MOIST, STIFF
	1.5		25		SM		10YR 4/6	SILTY SAND (SM) DARK YELLOWISH BROWN, FINE TO MEDIUM, MOIST, MEDIUM DENSE
			30					

BORING & WELL CONSTRUCTION CARRILLO.GPJ KENNEDY JENKS.GDT 10/30/05

F-40.1
(6-87) (3-88) (8-90)

Boring Log

Kennedy/Jenks Consultants

Project Name: Carrillo Plaza | Project Number: 0583006 | Boring Name: KJSB-6

SAMPLES Type & No.	Recovery (Feet)	Penetr. Resist. Blows/6"	Drill Depth (Feet)	BACKFILL DETAILS	USCS Log	Lithology	Color	SAMPLE DESCRIPTION and DRILLING REMARKS
x	5				SM		10YR 4/6	**SILTY SAND (SM)** DARK YELLOWISH BROWN, FINE TO MEDIUM, MOIST, MEDIUM DENSE, continued
				Water at 33.5' ▽				
x	4.5		35		SP-SM		10YR 5/6	**SAND (SP-SM)** YELLOWISH BROWN, INTERBEDDED WITH SILTY SAND, WET, DENSE
					ML		10YR 4/5 2.5YR 4/6	**CLAYEY SILT (ML)** DARK YELLOWISH BROWN TO RED, MOTTLED, VERY MOIST, STIFF
x	3.5		40					GRADES TO SANDY SILT
	3		45					**GRAVELLY SAND (SP)** DARK YELLOWISH BROWN, FINE, GRAVEL UP TO 1/2", WET, DENSE, SOME CLAY
x					SP		10YR 4/4	WITH SILT LENSES
	2.3		50					
x								

TOTAL DEPTH = 54 FEET

BORING & WELL CONSTRUCTION CARRILLO.GPJ KENNEDY JENKS.GDT 10/30/05

F-40.1
(6-87) (3-88) (8-90)

SHEET 2 OF 2

Boring Log

Kennedy/Jenks Consultants

BORING LOCATION	South Parking Lot next to Carrows
DRILLING COMPANY	Vironex
DRILLER	Brandon
DRILLING METHOD(S)	Direct Push
DRILL BIT(S) SIZE	2"
ISOLATION CASING	n/a
FROM / TO / FT.	n/a / n/a
BLANK CASING	n/a
FROM / TO / FT.	n/a / n/a
SLOTTED CASING	n/a
FROM / TO / FT.	n/a / n/a
SIZE AND TYPE OF FILTER PACK	n/a
FROM / TO / FT.	n/a / n/a
SEAL	n/a
FROM / TO / FT.	n/a / n/a
GROUT	n/a
FROM / TO / FT.	n/a / n/a

Boring Name	KJSB-7
Project Name	Carrillo Plaza
Project Number	0583006
ELEVATION AND DATUM	Not Surveyed
TOTAL DEPTH	60.0 ft. bgs
DATE STARTED	10/21/05
DATE COMPLETED	10/21/05
STATIC WATER ELEVATION	n/a
LOGGED BY	Matt Padberg
SAMPLING METHODS	
WELL COMPLETION	☐ SURFACE HOUSING ☐ STAND PIPE n/a FT.

SAMPLES Type & No.	Recovery (Feet)	Penetr. Resist. Blows/6"	Drill Depth (Feet)	BACKFILL DETAILS	USCS Log	Lithology	Color	SAMPLE DESCRIPTION and DRILLING REMARKS
			0					ASPHALT, 2"
	4.5				SP		10YR 6/8 7.5 YR 4/4	**GRAVELLY SAND WITH SILT (SP)** BROWNISH YELLOW TO BROWN, MOTTLED, FINE TO COARSE, DRY, SLIGHTLY DENSE
					SM		10YR 6/6	**SILTY SAND (SM)** BROWNISH YELLOW, FINE TO MEDIUM, DRY, SLIGHTLY DENSE
					ML		10YR 5/6	**SANDY SILT (ML)** YELLOWISH BROWN, FINE SAND, LENSES OF SILT AND GRAVEL, DRY, MEDIUM STIFF
x	5		5		SP		10YR 5/6	**GRAVELLY SAND (SP)** YELLOWISH BROWN, FINE, DRY, DENSE
x	4		10					**SANDY SILT (ML)** BROWN, FINE SAND, MOIST, STIFF
	4		15					LENSES OF COARSE SAND AND FINE SAND
x	4.5		20		ML		7.5 YR 4/4	
	5		25	Water at 28' ▽				
x			30		CL		10YR 5/6 10YR 6/2	**SILTY CLAY (CL)** YELLOWISH BROWN TO LIGHT BROWNISH GRAY, MOTTLED, WET, STIFF

BORING & WELL CONSTRUCTION CARRILLO.GPJ KENNEDY JENKS.GDT 10/27/05

F-40.1
(6-87) (3-88) (8-90)

Boring Log

Kennedy/Jenks Consultants

Project Name: Carrillo Plaza | Project Number: 0583006 | Boring Name: KJSB-7

SAMPLES Type & No.	SAMPLES Recovery (Feet)	SAMPLES Penetr. Resist. Blows/6"	Drill Depth (Feet)	BACKFILL DETAILS	USCS Log	Lithology	Color	SAMPLE DESCRIPTION and DRILLING REMARKS
	5				SM		10YR 5/4	**SILTY SAND (SM)** YELLOWISH BROWN, FINE TO COARSE SAND, WET TO SATURATED, DENSE
					CL		~~10YR 5/6~~ 10YR 6/2	**SILTY CLAY (CL)** YELLOWISH BROWN TO LIGHT BROWNISH GRAY, MOTTLED, WET, STIFF
x					SM		10YR 5/4	**SILTY SAND (SM)** YELLOWISH BROWN, FINE TO MEDIUM SAND, MOIST, DENSE, SOME COARSE SAND AND CLAY
	3.5		35		ML		10YR 5/6 10YR 6/2	**CLAYEY SILT (ML)** YELLOWISH BROWN TO LIGHT BROWNISH GRAY, MOTTLED, MOIST, STIFF
x	3		40		SM		10YR 4/4	**SILTY SAND (SM)** DARK YELLOWISH BROWN, FINE TO MEDIUM, LENSES OF CLAYEY SILT, WITH ORGANICS, MOIST, DENSE LENSES OF CLAY
	2.5		45					
x	4		50		CL		10YR 5/8 10YR 6/3 10R 4/8	**SILTY CLAY (CL)** YELLOWISH BROWN, PALE BROWN, RED, MOTTLED, ORGANICS, MOIST, VERY STIFF
					SM		7.5YR 4/6	**SILTY SAND (SM)** STRONG BROWN, FINE, SLIGHTLY MOIST, VERY DENSE LENSES OF COARSE SAND AND GRAVEL
x	2.5		55					
			60		SP		2.5Y 6/6	**SAND (SP)** OLIVE YELLOW, FINE, DRY, MEDIUM DENSE (AT BOTTOM OF HOLE)

TOTAL DEPTH = 60 FEET

BORING & WELL CONSTRUCTION CARRILLO.GPJ KENNEDY JENKS.GDT 10/27/05

F-40.1
(6-87) (3-88) (8-90)

APPENDIX B

CONE PENETRATION TESTS

February 15, 2006

Lab No: 67564-2

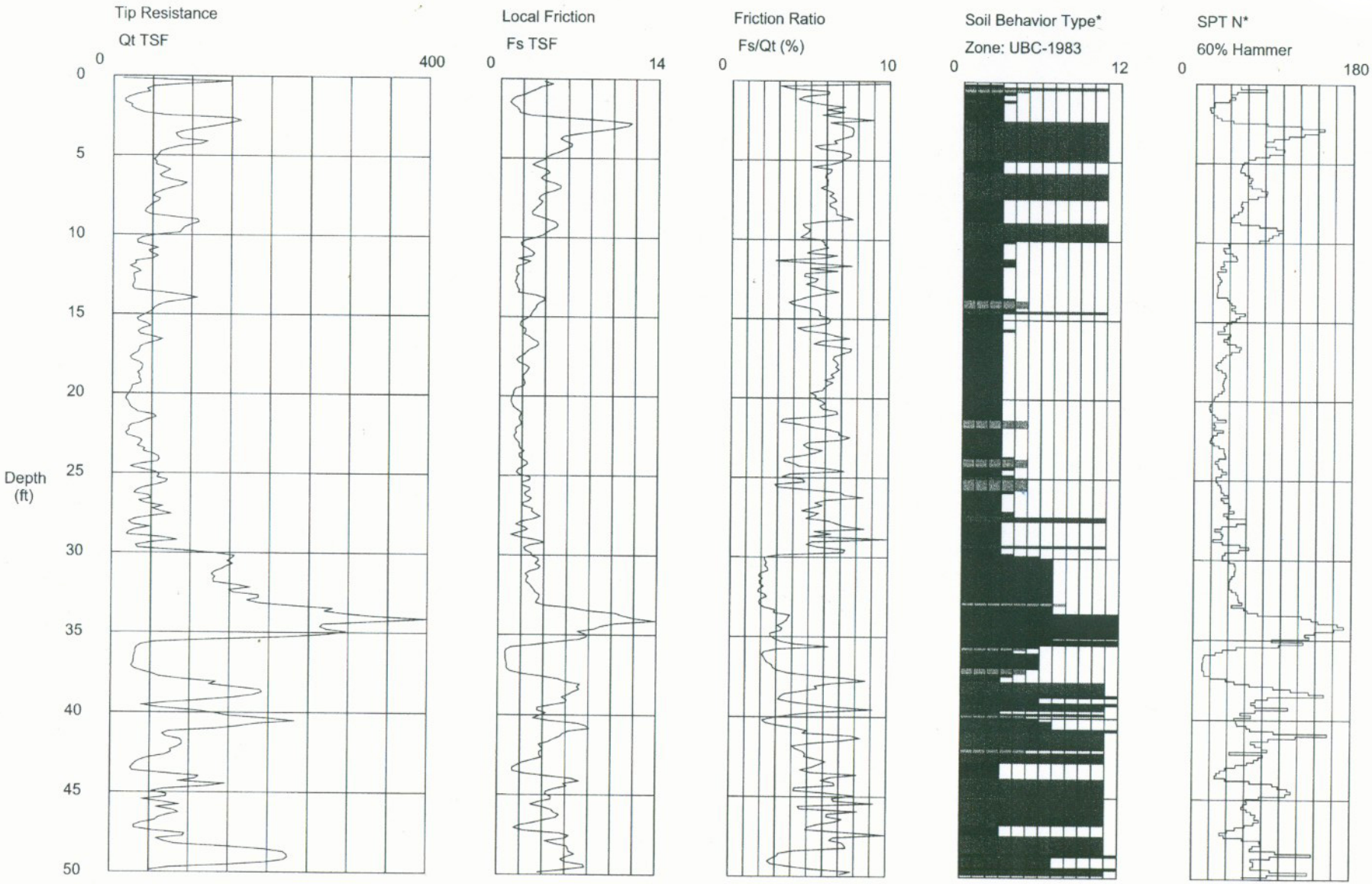
File No: 06-12339-2

Pacific Materials Laboratory of Santa Barbara, Inc.

Pacific Materials Lab

Operator: JH-VO
Sounding: CPT-01
Cone Used: DSG0786

CPT Date/Time: 1/11/2006 9:39:01 AM
Location: Carrows Parking Lot
Job Number:



Maximum Depth = 50.36 feet

Depth Increment = 0.164 feet

1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

*Soil behavior type and SPT based on data from UBC-1983

Holguin, Fahan & Associates, Inc.

Project ID: Pacific Materials Lab
Data File: SDF(364).cpt
CPT Date: 1/11/2006 9:39:01 AM
GW During Test: 30 ft

Sounding ID: CPT-01
Project No:
Cone/Rig: DSG0786

Depth ft	qc PS tsf	qc1n PS -	qincs PS -	Slv Stss tsf	pore prss (psi)	Frct Ratio %	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60%	SPT R-N 60%	Rel Den %	Ftn Ang deg	Und Shr tsf	Nk -
0.16	11.9	19.1	-	3.9	-0.3	9.9	silty CLAY to CLAY	115	1.5	13	8	-	-	0.8	15
0.33	149.4	239.6	320.4	4.6	-0.3	3.1	stiff SAND to clayy SAND	115	1.0	100	100	-	-	9.3	16
0.49	92.6	148.5	257.1	3.6	-0.3	3.9	stiff SAND to clayy SAND	115	1.0	100	93	-	-	5.8	16
0.66	51.3	82.3	245.6	3.2	-0.3	6.2	very stiff fine SOIL	120	2.0	41	26	61	48	-	30
0.82	42.5	68.2	222.9	2.6	-0.3	6.1	very stiff fine SOIL	120	2.0	34	21	54	48	-	30
0.98	46.2	74.1	194.5	2.1	-0.3	4.6	clayy SILT to silty CLAY	115	2.0	37	23	-	-	3.1	15
1.15	30.5	48.9	153.1	1.3	-0.3	4.2	clayy SILT to silty CLAY	115	2.0	24	15	-	-	2.0	15
1.31	20.3	32.6	-	1.0	-0.3	4.9	silty CLAY to CLAY	115	1.5	22	14	-	-	1.3	15
1.48	14.6	23.5	-	0.8	-0.3	5.8	silty CLAY to CLAY	115	1.5	16	10	-	-	1.0	15
1.64	15.1	24.2	-	1.1	-0.3	7.2	silty CLAY to CLAY	115	1.5	16	10	-	-	1.0	15
1.80	23.6	37.9	-	1.4	-0.3	6.0	silty CLAY to CLAY	115	1.5	25	16	-	-	1.6	15
1.97	22.9	36.7	-	1.6	-0.3	7.1	silty CLAY to CLAY	115	1.5	24	15	-	-	1.5	15
2.13	29.3	47.0	-	1.7	-0.3	5.8	silty CLAY to CLAY	115	1.5	31	20	-	-	1.9	15
2.30	38.9	62.4	-	2.7	-0.3	7.0	very stiff fine SOIL	120	2.0	31	19	51	46	-	30
2.46	65.8	105.5	-	5.9	-0.3	9.0	very stiff fine SOIL	120	2.0	53	33	69	48	-	30
2.62	151.5	243.0	465.5	9.5	-0.2	6.3	very stiff fine SOIL	120	2.0	100	76	95	48	-	30
2.79	161.5	258.9	531.0	11.6	-0.2	7.2	very stiff fine SOIL	120	2.0	100	81	95	48	-	30
2.95	147.5	236.6	521.4	11.3	-0.2	7.7	very stiff fine SOIL	120	2.0	100	74	95	48	-	30
3.12	130.9	209.9	486.1	10.1	-0.2	7.7	very stiff fine SOIL	120	2.0	100	65	91	48	-	30
3.28	109.7	176.0	434.1	8.4	-0.2	7.7	very stiff fine SOIL	120	2.0	88	55	86	48	-	30
3.45	91.2	146.3	387.6	7.0	-0.2	7.6	very stiff fine SOIL	120	2.0	73	46	80	48	-	30
3.61	79.1	126.8	339.1	5.6	-0.2	7.1	very stiff fine SOIL	120	2.0	63	40	75	47	-	30
3.77	81.0	129.9	325.2	5.2	-0.2	6.5	very stiff fine SOIL	120	2.0	65	41	76	47	-	30
3.94	85.9	137.8	342.6	5.7	-0.1	6.7	very stiff fine SOIL	120	2.0	69	43	78	47	-	30
4.10	119.7	191.9	359.4	6.3	-0.1	5.3	very stiff fine SOIL	120	2.0	96	60	89	48	-	30
4.27	111.3	178.5	357.8	6.2	-0.1	5.6	very stiff fine SOIL	120	2.0	89	56	86	48	-	30
4.43	83.3	133.6	342.9	5.7	-0.2	6.9	very stiff fine SOIL	120	2.0	67	42	77	46	-	30
4.59	69.8	112.0	330.0	5.2	-0.2	7.5	very stiff fine SOIL	120	2.0	56	35	71	45	-	30
4.76	60.3	96.8	305.6	4.5	-0.2	7.6	very stiff fine SOIL	120	2.0	48	30	66	44	-	30
4.92	57.2	91.8	286.7	4.1	-0.2	7.2	very stiff fine SOIL	120	2.0	46	29	64	44	-	30
5.09	55.7	89.4	277.9	3.9	-0.2	7.0	very stiff fine SOIL	120	2.0	45	28	63	44	-	30
5.25	51.7	82.8	251.6	3.3	-0.2	6.3	very stiff fine SOIL	120	2.0	41	26	61	43	-	30
5.41	55.1	88.4	228.1	2.8	-0.2	5.1	very stiff fine SOIL	120	2.0	44	28	63	43	-	30
5.58	54.1	86.8	258.9	3.4	-0.3	6.4	very stiff fine SOIL	120	2.0	43	27	62	43	-	30
5.74	65.2	104.5	283.5	4.1	-0.2	6.3	very stiff fine SOIL	120	2.0	52	33	68	44	-	30
5.91	72.5	116.3	290.8	4.3	-0.3	6.0	very stiff fine SOIL	120	2.0	58	36	72	44	-	30
6.07	66.1	106.0	275.1	3.9	-0.3	6.0	very stiff fine SOIL	120	2.0	53	33	69	44	-	30
6.23	58.7	93.9	263.2	3.6	-0.3	6.1	very stiff fine SOIL	120	2.0	47	29	65	43	-	30
6.40	63.5	100.3	271.1	3.9	-0.3	6.1	very stiff fine SOIL	120	2.0	50	32	67	43	-	30
6.56	77.8	121.1	301.0	4.7	-0.2	6.1	very stiff fine SOIL	120	2.0	61	39	73	44	-	30
6.73	93.7	144.2	316.5	5.3	-0.2	5.7	very stiff fine SOIL	120	2.0	72	47	79	45	-	30
6.89	86.7	131.7	315.9	5.3	-0.2	6.1	very stiff fine SOIL	120	2.0	66	43	76	44	-	30
7.05	72.2	108.5	295.4	4.7	-0.3	6.5	very stiff fine SOIL	120	2.0	54	36	70	43	-	30
7.22	62.4	92.6	264.4	3.9	-0.3	6.3	very stiff fine SOIL	120	2.0	46	31	64	42	-	30
7.38	53.8	79.0	251.4	3.5	-0.3	6.6	very stiff fine SOIL	120	2.0	39	27	59	42	-	30
7.55	50.7	81.4	258.7	3.4	-0.3	6.7	very stiff fine SOIL	120	2.0	41	25	60	41	-	30
7.71	59.8	85.8	254.5	3.7	-0.3	6.3	very stiff fine SOIL	120	2.0	43	30	62	42	-	30
7.87	57.3	81.4	248.4	3.6	-0.3	6.3	very stiff fine SOIL	120	2.0	41	29	60	42	-	30
8.04	49.7	79.7	255.2	3.3	-0.3	6.7	very stiff fine SOIL	120	2.0	40	25	60	41	-	30
8.20	46.3	74.3	247.0	3.1	-0.3	6.7	very stiff fine SOIL	120	2.0	37	23	57	40	-	30
8.37	42.2	67.6	-	2.8	-0.3	6.7	very stiff fine SOIL	120	2.0	34	21	54	40	-	30
8.53	40.0	64.1	-	2.8	-0.3	7.2	very stiff fine SOIL	120	2.0	32	20	52	39	-	30
8.69	46.6	74.7	-	3.6	-0.3	7.8	very stiff fine SOIL	120	2.0	37	23	57	40	-	30
8.86	74.4	99.5	258.8	4.2	-0.3	5.7	very stiff fine SOIL	120	2.0	50	37	67	42	-	30
9.02	107.1	142.0	274.7	4.8	-0.2	4.6	very stiff fine SOIL	120	2.0	71	54	79	44	-	30
9.19	108.9	143.1	279.9	5.1	-0.2	4.7	very stiff fine SOIL	120	2.0	72	54	79	44	-	30
9.35	98.8	128.7	275.3	4.9	-0.3	5.0	very stiff fine SOIL	120	2.0	64	49	75	43	-	30
9.51	90.5	116.9	257.6	4.4	-0.3	4.9	very stiff fine SOIL	120	2.0	58	45	72	43	-	30
9.68	87.3	111.7	244.2	4.1	-0.3	4.7	very stiff fine SOIL	120	2.0	56	44	71	43	-	30
9.84	85.3	108.3	231.6	3.7	-0.2	4.4	very stiff fine SOIL	120	2.0	54	43	70	42	-	30
10.01	55.0	69.3	215.8	3.1	-0.3	5.7	clayy SILT to silty CLAY	115	2.0	35	28	-	-	3.6	15
10.17	37.2	59.7	-	2.2	-0.3	6.0	silty CLAY to CLAY	115	1.5	40	25	-	-	2.4	15
10.34	31.1	49.8	-	1.8	-0.3	6.0	silty CLAY to CLAY	115	1.5	33	21	-	-	2.0	15
10.50	31.1	49.9	-	1.9	-0.3	6.3	silty CLAY to CLAY	115	1.5	33	21	-	-	2.0	15

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Holguin, Fahan & Associates, Inc.

Project ID: Pacific Materials Lab
Data File: SDF(364).cpt
CPT Date: 1/11/2006 9:39:01 AM
GW During Test: 30 ft

Sounding ID: CPT-01
Project No:
Cone/Rig: DSG0786

Depth ft	qc PS tsf	qcln PS -	qlncs PS -	Slv Stss tsf	pore prss (psi)	Frct Rato %	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60%	SPT R-N 60%	Rel Den %	Ftn Ang deg	Und Shr tsf	Nk -
10.66	45.2	61.1	196.0	2.4	-0.2	5.4	clayy SILT to silty CLAY	115	2.0	31	23	-	-	3.0	15
10.83	57.6	69.8	196.0	2.8	-0.2	4.8	clayy SILT to silty CLAY	115	2.0	35	29	-	-	3.8	15
10.99	45.0	69.0	-	3.0	-0.2	6.8	very stiff fine SOIL	120	2.0	35	23	55	38	-	30
11.16	48.9	64.2	211.2	2.8	-0.2	5.8	clayy SILT to silty CLAY	115	2.0	32	24	-	-	3.2	15
11.32	57.7	68.3	142.8	1.6	-0.2	2.8	silty SAND to sandy SILT	120	4.0	17	14	54	40	-	16
11.48	50.7	59.7	194.4	2.7	-0.2	5.4	clayy SILT to silty CLAY	115	2.0	30	25	-	-	3.3	15
11.65	28.6	41.4	-	2.2	-0.3	7.9	silty CLAY to CLAY	115	1.5	28	19	-	-	1.9	15
11.81	29.4	42.0	-	1.5	-0.3	5.1	silty CLAY to CLAY	115	1.5	28	20	-	-	1.9	15
11.98	21.7	30.5	-	1.5	-0.3	7.0	silty CLAY to CLAY	115	1.5	20	14	-	-	1.4	15
12.14	30.5	42.5	-	1.4	-0.3	4.8	clayy SILT to silty CLAY	115	2.0	21	15	-	-	2.0	15
12.30	35.7	49.0	-	1.7	-0.3	4.7	clayy SILT to silty CLAY	115	2.0	25	18	-	-	2.3	15
12.47	26.5	36.0	-	1.5	-0.4	5.7	silty CLAY to CLAY	115	1.5	24	18	-	-	1.7	15
12.63	26.9	36.0	-	1.4	-0.3	5.5	silty CLAY to CLAY	115	1.5	24	18	-	-	1.7	15
12.80	27.7	36.6	-	1.3	-0.4	4.9	silty CLAY to CLAY	115	1.5	24	18	-	-	1.8	15
12.96	27.8	36.3	-	1.5	-0.4	5.5	silty CLAY to CLAY	115	1.5	24	19	-	-	1.8	15
13.12	26.0	33.5	-	1.5	-0.4	6.0	silty CLAY to CLAY	115	1.5	22	17	-	-	1.7	15
13.29	24.9	31.7	-	1.7	-0.4	7.0	silty CLAY to CLAY	115	1.5	21	17	-	-	1.6	15
13.45	27.7	34.9	-	1.6	-0.4	6.0	silty CLAY to CLAY	115	1.5	23	18	-	-	1.8	15
13.62	63.8	69.1	197.1	3.1	-0.3	4.9	clayy SILT to silty CLAY	115	2.0	35	32	-	-	4.2	15
13.78	89.9	96.8	216.3	3.9	-0.3	4.3	very stiff fine SOIL	120	2.0	48	45	66	41	-	30
13.94	107.4	114.9	216.6	3.9	-0.3	3.7	silty SAND to sandy SILT	120	4.0	29	27	72	42	-	16
14.11	88.2	93.9	203.1	3.5	-0.3	4.0	clayy SILT to silty CLAY	115	2.0	47	44	-	-	5.8	15
14.27	67.8	71.8	198.8	3.2	-0.3	4.8	clayy SILT to silty CLAY	115	2.0	36	34	-	-	4.5	15
14.44	57.9	61.0	200.4	3.2	-0.4	5.6	clayy SILT to silty CLAY	115	2.0	30	29	-	-	3.8	15
14.60	52.6	61.1	-	3.0	-0.3	5.7	clayy SILT to silty CLAY	115	2.0	31	26	-	-	3.5	15
14.76	50.4	57.9	-	2.8	-0.3	5.7	clayy SILT to silty CLAY	115	2.0	29	25	-	-	3.3	15
14.93	44.2	50.3	-	2.7	-0.3	6.3	silty CLAY to CLAY	115	1.5	34	29	-	-	2.9	15
15.09	38.4	43.2	-	2.4	-0.3	6.4	silty CLAY to CLAY	115	1.5	29	26	-	-	2.5	15
15.26	30.8	34.3	-	1.9	-0.4	6.4	silty CLAY to CLAY	115	1.5	23	21	-	-	2.0	15
15.42	32.8	36.1	-	1.8	-0.3	5.6	silty CLAY to CLAY	115	1.5	24	22	-	-	2.1	15
15.58	43.3	45.1	-	1.8	-0.3	4.3	clayy SILT to silty CLAY	115	2.0	23	22	-	-	2.8	15
15.75	48.1	49.8	-	2.3	-0.3	4.8	clayy SILT to silty CLAY	115	2.0	25	24	-	-	3.1	15
15.91	37.9	40.5	-	2.3	-0.4	6.2	silty CLAY to CLAY	115	1.5	27	25	-	-	2.5	15
16.08	32.3	34.1	-	2.1	-0.4	6.9	silty CLAY to CLAY	115	1.5	23	22	-	-	2.1	15
16.24	34.6	36.2	-	2.6	-0.4	7.8	silty CLAY to CLAY	115	1.5	24	23	-	-	2.2	15
16.40	49.9	51.7	-	2.9	-0.3	5.9	silty CLAY to CLAY	115	1.5	34	33	-	-	3.3	15
16.57	63.8	62.8	197.8	3.3	-0.3	5.3	clayy SILT to silty CLAY	115	2.0	31	32	-	-	4.2	15
16.73	53.7	54.5	-	3.4	-0.4	6.5	silty CLAY to CLAY	115	1.5	36	36	-	-	3.5	15
16.90	41.9	42.2	-	3.2	-0.4	7.8	silty CLAY to CLAY	115	1.5	28	28	-	-	2.7	15
17.06	34.8	34.7	-	2.6	-0.4	7.8	silty CLAY to CLAY	115	1.5	23	23	-	-	2.3	15
17.23	34.1	33.7	-	2.4	-0.4	7.2	silty CLAY to CLAY	115	1.5	22	23	-	-	2.2	15
17.39	32.7	32.0	-	2.1	-0.4	6.8	silty CLAY to CLAY	115	1.5	21	22	-	-	2.1	15
17.55	26.9	26.0	-	1.7	-0.4	6.7	silty CLAY to CLAY	115	1.5	17	18	-	-	1.7	15
17.72	22.4	21.5	-	1.5	-0.4	7.0	silty CLAY to CLAY	115	1.5	14	15	-	-	1.4	15
17.88	24.9	23.7	-	1.7	-0.4	7.1	silty CLAY to CLAY	115	1.5	16	17	-	-	1.6	15
18.05	33.8	31.9	-	2.2	-0.4	6.9	silty CLAY to CLAY	115	1.5	21	23	-	-	2.2	15
18.21	38.2	35.7	-	2.6	-0.4	7.1	silty CLAY to CLAY	115	1.5	24	25	-	-	2.5	15
18.37	37.7	34.9	-	2.5	-0.4	6.8	silty CLAY to CLAY	115	1.5	23	25	-	-	2.4	15
18.54	36.5	33.6	-	2.3	-0.4	6.5	silty CLAY to CLAY	115	1.5	22	24	-	-	2.4	15
18.70	31.6	28.8	-	2.1	-0.4	6.8	silty CLAY to CLAY	115	1.5	19	21	-	-	2.0	15
18.87	34.7	31.4	-	2.1	-0.5	6.2	silty CLAY to CLAY	115	1.5	21	23	-	-	2.2	15
19.03	33.5	30.0	-	2.2	-0.5	6.7	silty CLAY to CLAY	115	1.5	20	22	-	-	2.2	15
19.19	36.2	32.2	-	2.2	-0.5	6.3	silty CLAY to CLAY	115	1.5	21	24	-	-	2.3	15
19.36	36.3	32.0	-	2.1	-0.5	6.1	silty CLAY to CLAY	115	1.5	21	24	-	-	2.3	15
19.52	25.0	21.9	-	1.5	-0.5	6.1	silty CLAY to CLAY	115	1.5	15	17	-	-	1.6	15
19.69	24.8	21.5	-	1.3	-0.5	5.3	silty CLAY to CLAY	115	1.5	14	17	-	-	1.6	15
19.85	22.5	19.4	-	1.2	-0.5	5.7	silty CLAY to CLAY	115	1.5	13	15	-	-	1.4	15
20.01	21.0	17.9	-	1.1	-0.5	5.6	silty CLAY to CLAY	115	1.5	12	14	-	-	1.3	15
20.18	18.1	15.3	-	1.0	-0.5	6.2	silty CLAY to CLAY	115	1.5	10	12	-	-	1.1	15
20.34	16.8	14.1	-	1.0	-0.5	6.4	silty CLAY to CLAY	115	1.5	9	11	-	-	1.0	15
20.51	19.8	16.5	-	1.1	-0.5	6.0	silty CLAY to CLAY	115	1.5	11	13	-	-	1.2	15
20.67	21.1	17.4	-	1.2	-0.5	6.2	silty CLAY to CLAY	115	1.5	12	14	-	-	1.3	15
20.83	22.7	18.6	-	1.5	-0.5	7.1	silty CLAY to CLAY	115	1.5	12	15	-	-	1.4	15
21.00	27.5	22.4	-	1.9	-0.5	7.1	silty CLAY to CLAY	115	1.5	15	18	-	-	1.8	15
21.16	32.7	26.4	-	1.9	-0.5	6.0	silty CLAY to CLAY	115	1.5	18	22	-	-	2.1	15

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

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Sounding ID: CPT-01
Project No:
Cone/Rig: DSG0786

Depth ft	qc PS tsf	qc1n PS - *	q1ncs PS -	Slv Stss tsf	pore prss (psi)	Frct Rato %	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60% *	SPT R-N 60%	Rel Den % *	Ftn Ang deg *	Und Shr tsf	Nk - *
21.33	52.0	45.2	133.2	1.7	-0.5	3.4	clayy SILT to silty CLAY	115	2.0	23	26	-	-	3.4	15
21.49	55.8	48.4	132.7	1.8	-0.5	3.3	clayy SILT to silty CLAY	115	2.0	24	28	-	-	3.6	15
21.65	44.0	34.7	-	1.9	-0.5	4.5	silty CLAY to CLAY	115	1.5	23	29	-	-	2.9	15
21.82	36.8	28.8	-	1.9	-0.5	5.3	silty CLAY to CLAY	115	1.5	19	25	-	-	2.4	15
21.98	23.9	18.6	-	1.5	-0.5	6.6	silty CLAY to CLAY	115	1.5	12	16	-	-	1.5	15
22.15	20.5	15.8	-	1.4	-0.5	7.3	silty CLAY to CLAY	115	1.5	11	14	-	-	1.3	15
22.31	21.6	16.6	-	1.5	-0.5	7.3	silty CLAY to CLAY	115	1.5	11	14	-	-	1.4	15
22.47	16.9	12.9	-	1.3	-0.5	8.2	silty CLAY to CLAY	115	1.5	9	11	-	-	1.0	15
22.64	19.4	14.7	-	1.4	-0.5	7.5	silty CLAY to CLAY	115	1.5	10	13	-	-	1.2	15
22.80	32.0	24.0	-	1.6	-0.5	5.1	silty CLAY to CLAY	115	1.5	16	21	-	-	2.0	15
22.97	37.8	28.2	-	1.8	-0.5	4.8	silty CLAY to CLAY	115	1.5	19	25	-	-	2.4	15
23.13	35.8	26.5	-	1.8	-0.5	5.1	silty CLAY to CLAY	115	1.5	18	24	-	-	2.3	15
23.30	31.9	23.5	-	1.9	-0.5	6.1	silty CLAY to CLAY	115	1.5	16	21	-	-	2.0	15
23.46	41.2	30.0	-	2.2	-0.5	5.5	silty CLAY to CLAY	115	1.5	20	27	-	-	2.7	15
23.62	38.9	28.2	-	1.8	-0.5	4.7	silty CLAY to CLAY	115	1.5	19	26	-	-	2.5	15
23.79	51.4	37.0	-	1.8	-0.5	3.5	clayy SILT to silty CLAY	115	2.0	19	26	-	-	3.3	15
23.95	58.6	48.1	137.4	2.0	-0.5	3.5	clayy SILT to silty CLAY	115	2.0	24	29	-	-	3.8	15
24.12	59.8	42.5	-	2.4	-0.5	4.1	clayy SILT to silty CLAY	115	2.0	21	30	-	-	3.9	15
24.28	57.6	40.6	-	2.5	-0.5	4.5	clayy SILT to silty CLAY	115	2.0	20	29	-	-	3.7	15
24.44	33.5	23.5	-	2.1	-0.5	6.6	silty CLAY to CLAY	115	1.5	16	22	-	-	2.1	15
24.61	23.4	16.3	-	1.7	-0.5	7.7	silty CLAY to CLAY	115	1.5	11	16	-	-	1.5	15
24.77	40.4	27.9	-	1.5	-0.5	3.9	clayy SILT to silty CLAY	115	2.0	14	20	-	-	2.6	15
24.94	55.3	44.5	131.3	1.8	-0.4	3.4	clayy SILT to silty CLAY	115	2.0	22	28	-	-	3.6	15
25.10	59.7	40.8	-	2.7	-0.4	4.7	clayy SILT to silty CLAY	115	2.0	20	30	-	-	3.9	15
25.26	57.1	38.7	-	2.7	-0.4	4.9	silty CLAY to CLAY	115	1.5	26	38	-	-	3.7	15
25.43	70.9	56.5	133.0	2.0	-0.4	2.9	clayy SILT to silty CLAY	115	2.0	28	35	-	-	4.6	15
25.59	67.5	53.7	135.1	2.0	-0.4	3.1	clayy SILT to silty CLAY	115	2.0	27	34	-	-	4.4	15
25.76	53.4	35.5	-	2.7	-0.5	5.3	silty CLAY to CLAY	115	1.5	24	36	-	-	3.5	15
25.92	38.8	25.7	-	2.7	-0.5	7.3	silty CLAY to CLAY	115	1.5	17	26	-	-	2.5	15
26.08	31.3	20.6	-	2.3	-0.5	7.6	silty CLAY to CLAY	115	1.5	14	21	-	-	2.0	15
26.25	28.0	18.3	-	2.4	-0.4	8.9	silty CLAY to CLAY	115	1.5	12	19	-	-	1.8	15
26.41	47.1	30.5	-	2.9	-0.5	6.3	silty CLAY to CLAY	115	1.5	20	31	-	-	3.0	15
26.58	49.2	31.7	-	2.7	-0.4	5.6	silty CLAY to CLAY	115	1.5	21	33	-	-	3.2	15
26.74	34.3	22.0	-	2.0	-0.5	6.1	silty CLAY to CLAY	115	1.5	15	23	-	-	2.2	15
26.90	43.1	27.5	-	2.2	-0.4	5.4	silty CLAY to CLAY	115	1.5	18	29	-	-	2.8	15
27.07	65.5	41.5	-	3.0	-0.4	4.7	clayy SILT to silty CLAY	115	2.0	21	33	-	-	4.3	15
27.23	51.4	32.4	-	2.9	-0.4	5.8	silty CLAY to CLAY	115	1.5	22	34	-	-	3.3	15
27.40	62.1	38.9	-	3.3	-0.4	5.4	silty CLAY to CLAY	115	1.5	26	41	-	-	4.0	15
27.56	76.1	47.3	-	3.7	-0.4	4.9	clayy SILT to silty CLAY	115	2.0	24	38	-	-	5.0	15
27.72	48.7	30.1	-	3.0	-0.5	6.4	silty CLAY to CLAY	115	1.5	20	32	-	-	3.1	15
27.89	29.3	18.0	-	2.0	-0.5	7.1	silty CLAY to CLAY	115	1.5	12	20	-	-	1.8	15
28.05	21.2	13.0	-	1.5	-0.4	7.8	silty CLAY to CLAY	115	1.5	9	14	-	-	1.3	15
28.22	26.1	15.9	-	2.2	-0.5	9.1	silty CLAY to CLAY	115	1.5	11	17	-	-	1.6	15
28.38	48.3	29.2	-	2.6	-0.5	5.5	silty CLAY to CLAY	115	1.5	19	32	-	-	3.1	15
28.54	29.9	18.0	-	1.9	-0.5	6.8	silty CLAY to CLAY	115	1.5	12	20	-	-	1.9	15
28.71	21.2	12.7	-	1.1	-0.5	5.4	silty CLAY to CLAY	115	1.5	8	14	-	-	1.3	15
28.87	19.3	11.5	-	1.9	-0.5	9.9	silty CLAY to CLAY	115	1.5	8	13	-	-	1.2	15
29.04	64.0	37.8	-	3.3	-0.5	5.3	silty CLAY to CLAY	115	1.5	25	43	-	-	4.2	15
29.20	83.2	48.9	-	4.0	-0.4	5.0	clayy SILT to silty CLAY	115	2.0	24	42	-	-	5.4	15
29.36	49.1	28.7	-	2.8	-0.5	5.8	silty CLAY to CLAY	115	1.5	19	33	-	-	3.2	15
29.53	30.6	17.8	-	2.2	-0.5	7.7	silty CLAY to CLAY	115	1.5	12	20	-	-	1.9	15
29.69	33.2	19.2	-	2.4	-0.5	7.6	silty CLAY to CLAY	115	1.5	13	22	-	-	2.1	15
29.86	91.7	67.6	153.0	2.9	-0.4	3.2	clayy SILT to silty CLAY	115	2.0	34	46	-	-	6.0	15
30.02	133.7	98.3	153.9	2.9	-0.4	2.2	silty SAND to sandy SILT	120	4.0	25	33	66	39	-	16
30.19	156.4	114.9	170.3	3.5	-0.4	2.3	silty SAND to sandy SILT	120	4.0	29	39	72	40	-	16
30.35	152.4	111.8	170.7	3.5	-0.4	2.4	silty SAND to sandy SILT	120	4.0	28	38	71	40	-	16
30.51	146.9	107.6	163.2	3.2	-0.4	2.2	silty SAND to sandy SILT	120	4.0	27	37	69	40	-	16
30.68	154.0	112.7	173.8	3.7	-0.3	2.4	silty SAND to sandy SILT	120	4.0	28	39	71	40	-	16
30.84	145.3	106.2	168.5	3.5	-0.4	2.5	silty SAND to sandy SILT	120	4.0	27	36	69	39	-	16
31.01	139.9	102.1	150.5	2.7	-0.3	2.0	silty SAND to sandy SILT	120	4.0	26	35	68	39	-	16
31.17	130.9	95.4	140.6	2.4	-0.3	1.9	silty SAND to sandy SILT	120	4.0	24	33	65	39	-	16
31.33	127.1	92.5	145.4	2.6	-0.3	2.1	silty SAND to sandy SILT	120	4.0	23	32	64	39	-	16
31.50	131.6	95.6	142.5	2.5	-0.2	1.9	silty SAND to sandy SILT	120	4.0	24	33	66	39	-	16
31.66	128.7	93.4	141.1	2.4	-0.2	1.9	silty SAND to sandy SILT	120	4.0	23	32	65	39	-	16
31.83	129.8	94.1	149.1	2.8	-0.2	2.2	silty SAND to sandy SILT	120	4.0	24	32	65	39	-	16

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Project ID: Pacific Materials Lab
Data File: SDF(364).cpt
CPT Date: 1/11/2006 9:39:01 AM
GW During Test: 30 ft

Sounding ID: CPT-01
Project No:
Cone/Rig: DSG0786

Depth ft	qc PS tsf	*qc1n PS -	qlncs PS -	Slv Stss tsf	pore prss (psi)	Frct Ratio %	* Material Behavior Description	Unit Wght pcf	Qc to N	* SPT R-N1 60%	SPT R-N 60%	* Rel Den %	* Ftn Ang deg	Und Shr tsf	* Nk -
31.99	157.8	114.3	158.5	2.9	-0.2	1.9	silty SAND to sandy SILT	120	4.0	29	39	71	40	-	16
32.15	176.4	127.5	168.1	3.1	-0.1	1.8	silty SAND to sandy SILT	120	4.0	32	44	75	40	-	16
32.32	149.0	107.6	162.8	3.3	-0.1	2.2	silty SAND to sandy SILT	120	4.0	27	37	69	39	-	16
32.48	154.7	111.6	171.3	3.6	-0.1	2.4	silty SAND to sandy SILT	120	4.0	28	39	71	40	-	16
32.65	186.5	134.3	179.3	3.6	0.0	2.0	silty SAND to sandy SILT	120	4.0	34	47	77	41	-	16
32.81	186.7	134.3	176.4	3.5	-0.1	1.9	silty SAND to sandy SILT	120	4.0	34	47	77	41	-	16
32.97	172.3	123.8	168.9	3.3	-0.1	1.9	silty SAND to sandy SILT	120	4.0	31	43	74	40	-	16
33.14	186.6	133.9	186.9	4.1	0.0	2.2	silty SAND to sandy SILT	120	4.0	33	47	77	41	-	16
33.30	227.7	163.2	238.7	6.6	0.0	2.9	silty SAND to sandy SILT	120	4.0	41	57	83	42	-	16
33.47	280.2	200.5	272.1	7.9	0.1	2.8	silty SAND to sandy SILT	120	4.0	50	70	90	43	-	16
33.63	269.8	192.8	305.3	10.4	0.1	3.9	stiff SAND to clayy SAND	115	1.0	100	100	-	-	16.7	16
33.79	294.7	210.4	318.4	11.0	0.1	3.7	stiff SAND to clayy SAND	115	1.0	100	100	-	-	18.3	16
33.96	332.9	237.4	342.4	12.1	0.2	3.7	stiff SAND to clayy SAND	115	1.0	100	100	-	-	20.7	16
34.12	406.8	289.7	386.5	13.9	0.3	3.4	stiff SAND to clayy SAND	115	1.0	100	100	-	-	25.3	16
34.29	336.1	239.1	320.6	10.3	0.5	3.1	stiff SAND to clayy SAND	115	1.0	100	100	-	-	20.9	16
34.45	268.0	190.4	284.0	9.0	0.7	3.4	stiff SAND to clayy SAND	115	1.0	100	100	-	-	16.6	16
34.61	264.3	187.6	275.5	8.5	-0.3	3.3	stiff SAND to clayy SAND	115	1.0	100	100	-	-	16.4	16
34.78	272.3	193.0	256.3	7.0	-0.4	2.6	silty SAND to sandy SILT	120	4.0	48	68	89	42	-	16
34.94	296.9	210.2	273.6	7.7	-0.4	2.6	silty SAND to sandy SILT	120	4.0	53	74	92	43	-	16
35.11	273.0	193.1	267.2	7.8	-0.4	2.9	silty SAND to sandy SILT	120	4.0	48	68	89	42	-	16
35.27	217.3	153.5	243.5	7.1	-0.4	3.3	silty SAND to sandy SILT	120	4.0	38	54	81	41	-	16
35.43	124.8	88.1	201.2	5.1	-0.5	4.2	clayy SILT to silty CLAY	115	2.0	44	62	-	-	8.2	15
35.60	53.1	27.9	-	3.3	-0.5	6.6	silty CLAY to CLAY	115	1.5	19	35	-	-	3.4	15
35.76	37.9	19.9	-	1.2	-0.5	3.2	clayy SILT to silty CLAY	115	2.0	10	19	-	-	2.4	15
35.93	32.5	17.0	-	0.7	-0.5	2.4	clayy SILT to silty CLAY	115	2.0	9	16	-	-	2.0	15
36.09	30.9	16.2	-	0.6	-0.5	2.2	clayy SILT to silty CLAY	115	2.0	8	15	-	-	1.9	15
36.26	31.0	16.2	-	0.7	-0.6	2.4	clayy SILT to silty CLAY	115	2.0	8	16	-	-	1.9	15
36.42	29.7	15.4	-	0.7	-0.6	2.4	clayy SILT to silty CLAY	115	2.0	8	15	-	-	1.9	15
36.58	29.1	15.1	-	0.7	-0.7	2.6	clayy SILT to silty CLAY	115	2.0	8	15	-	-	1.8	15
36.75	28.9	15.0	-	0.8	-0.7	2.9	silty CLAY to CLAY	115	1.5	10	19	-	-	1.8	15
36.91	28.4	14.7	-	0.8	-0.7	3.0	silty CLAY to CLAY	115	1.5	10	19	-	-	1.8	15
37.08	26.0	13.4	-	0.8	-0.8	3.3	silty CLAY to CLAY	115	1.5	9	17	-	-	1.6	15
37.24	29.1	15.0	-	1.1	-0.8	4.0	silty CLAY to CLAY	115	1.5	10	19	-	-	1.8	15
37.40	38.8	19.9	-	2.0	-0.8	5.5	silty CLAY to CLAY	115	1.5	13	26	-	-	2.5	15
37.57	51.5	26.4	-	3.8	-0.8	7.7	silty CLAY to CLAY	115	1.5	18	34	-	-	3.3	15
37.73	61.4	31.4	-	5.3	-0.8	9.0	silty CLAY to CLAY	115	1.5	21	41	-	-	4.0	15
37.90	91.8	46.8	-	6.0	-0.9	6.7	silty CLAY to CLAY	115	1.5	31	61	-	-	6.0	15
38.06	133.8	92.7	246.0	7.3	-0.9	5.5	very stiff fine SOIL	120	2.0	46	67	64	38	-	30
38.22	124.7	86.3	242.1	7.0	-0.9	5.7	very stiff fine SOIL	120	2.0	43	62	62	38	-	30
38.39	157.5	108.8	240.2	7.2	-0.9	4.6	very stiff fine SOIL	120	2.0	54	79	70	39	-	30
38.55	189.2	130.6	228.4	6.6	-0.9	3.6	silty SAND to sandy SILT	120	4.0	33	47	76	40	-	16
38.72	191.9	132.3	221.7	6.3	-0.8	3.3	silty SAND to sandy SILT	120	4.0	33	48	76	40	-	16
38.88	180.4	124.3	209.5	5.7	-0.9	3.2	silty SAND to sandy SILT	120	4.0	31	45	74	40	-	16
39.04	155.6	107.0	217.1	6.1	-0.9	4.0	very stiff fine SOIL	120	2.0	54	78	69	39	-	30
39.21	115.5	79.3	221.9	6.0	-1.0	5.3	very stiff fine SOIL	120	2.0	40	58	59	37	-	30
39.37	70.9	35.4	-	4.8	-1.0	6.9	silty CLAY to CLAY	115	1.5	24	47	-	-	4.6	15
39.54	38.7	19.3	-	3.5	-1.0	9.7	silty CLAY to CLAY	115	1.5	13	26	-	-	2.4	15
39.70	64.0	31.8	-	3.5	-1.0	5.7	silty CLAY to CLAY	115	1.5	21	43	-	-	4.1	15
39.86	107.4	73.5	182.9	4.3	-0.9	4.1	clayy SILT to silty CLAY	115	2.0	37	54	-	-	7.0	15
40.03	131.7	90.0	167.9	3.8	-0.8	2.9	silty SAND to sandy SILT	120	4.0	23	33	64	38	-	16
40.19	149.4	102.0	155.9	3.2	-0.8	2.2	silty SAND to sandy SILT	120	4.0	25	37	68	39	-	16
40.36	198.8	135.5	192.7	4.6	-0.8	2.3	silty SAND to sandy SILT	120	4.0	34	50	77	40	-	16
40.52	233.1	158.7	240.3	7.1	-0.8	3.1	silty SAND to sandy SILT	120	4.0	40	58	82	41	-	16
40.68	185.4	126.1	248.6	7.9	-0.9	4.3	very stiff fine SOIL	120	2.0	63	93	75	40	-	30
40.85	163.0	110.7	255.2	8.1	-0.9	5.1	very stiff fine SOIL	120	2.0	55	81	70	39	-	30
41.01	133.3	90.5	222.5	6.3	-0.9	4.8	very stiff fine SOIL	120	2.0	45	67	64	38	-	30
41.18	74.7	36.4	-	5.8	-0.9	8.0	silty CLAY to CLAY	115	1.5	24	50	-	-	4.8	15
41.34	65.9	32.0	-	5.5	-0.8	8.7	silty CLAY to CLAY	115	1.5	21	44	-	-	4.3	15
41.50	70.8	34.4	-	5.0	-0.8	7.3	silty CLAY to CLAY	115	1.5	23	47	-	-	4.6	15
41.67	88.4	42.8	-	4.5	-0.8	5.2	silty CLAY to CLAY	115	1.5	29	59	-	-	5.8	15
41.83	91.1	44.0	-	3.7	-0.8	4.2	clayy SILT to silty CLAY	115	2.0	22	46	-	-	5.9	15
42.00	91.0	43.9	-	3.9	-0.8	4.4	clayy SILT to silty CLAY	115	2.0	22	45	-	-	5.9	15
42.16	85.4	41.1	-	4.0	-0.9	4.9	silty CLAY to CLAY	115	1.5	27	57	-	-	5.6	15
42.32	76.1	36.5	-	3.7	-0.9	5.1	silty CLAY to CLAY	115	1.5	24	51	-	-	4.9	15
42.49	77.7	37.2	-	3.7	-0.9	5.0	silty CLAY to CLAY	115	1.5	25	52	-	-	5.0	15

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Project ID: Pacific Materials Lab
Data File: SDF(364).cpt
CPT Date: 1/11/2006 9:39:01 AM
GW During Test: 30 ft

Sounding ID: CPT-01
Project No:
Cone/Rig: DSG0786

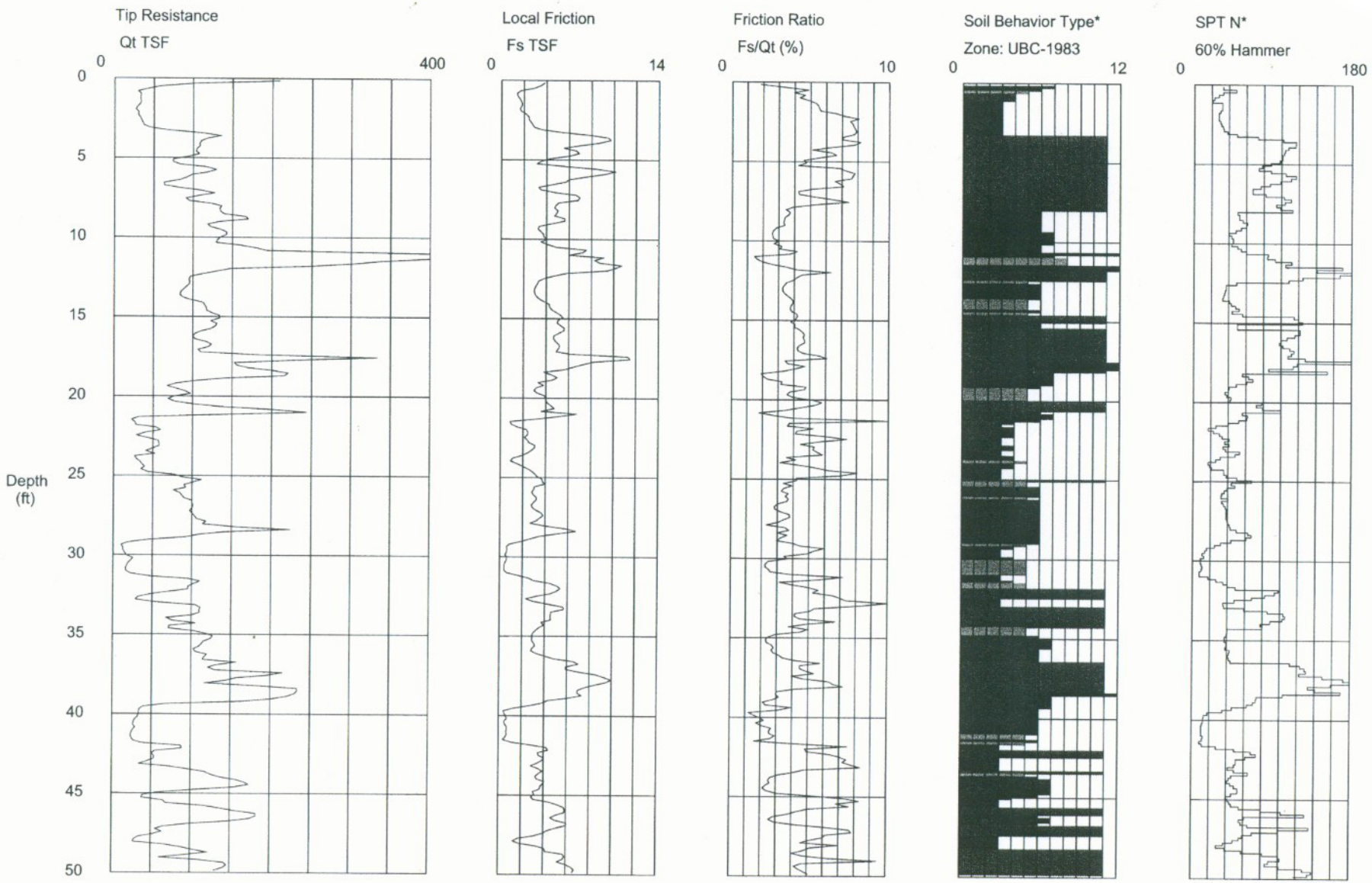
Depth ft	qc PS tsf	qc1n PS -	qincs PS -	Slv Stss tsf	pore prss (psi)	Frct Ratio %	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60%	SPT R-N 60%	Rel Den %	Ftn Ang deg	Und Shr tsf	Nk -
42.65	69.1	33.1	-	3.9	-1.0	5.9	silty CLAY to CLAY	115	1.5	22	46	-	-	4.5	15
42.82	49.6	23.6	-	3.1	-1.0	6.5	silty CLAY to CLAY	115	1.5	16	33	-	-	3.2	15
42.98	38.4	18.3	-	2.2	-1.0	6.2	silty CLAY to CLAY	115	1.5	12	26	-	-	2.4	15
43.15	32.4	15.4	-	1.7	-1.1	5.8	silty CLAY to CLAY	115	1.5	10	22	-	-	2.0	15
43.31	29.1	13.8	-	1.3	-1.1	5.0	silty CLAY to CLAY	115	1.5	9	19	-	-	1.8	15
43.47	26.1	12.4	-	1.4	-1.1	5.8	silty CLAY to CLAY	115	1.5	8	17	-	-	1.6	15
43.64	27.8	13.1	-	2.3	-1.1	9.0	silty CLAY to CLAY	115	1.5	9	19	-	-	1.7	15
43.80	65.8	31.0	-	4.3	-1.1	6.7	silty CLAY to CLAY	115	1.5	21	44	-	-	4.2	15
43.97	112.8	53.0	-	6.6	-1.1	6.0	silty CLAY to CLAY	115	1.5	35	75	-	-	7.4	15
44.13	108.2	50.8	-	7.3	-1.1	6.9	silty CLAY to CLAY	115	1.5	34	72	-	-	7.1	15
44.29	86.3	40.4	-	5.8	-1.2	7.0	silty CLAY to CLAY	115	1.5	27	58	-	-	5.6	15
44.46	145.9	96.9	215.9	6.2	-1.1	4.3	very stiff fine SOIL	120	2.0	48	73	66	38	-	30
44.62	121.4	80.5	196.0	5.1	-1.2	4.3	clayy SILT to silty CLAY	115	2.0	40	61	-	-	8.0	15
44.79	68.0	31.6	-	4.4	-1.2	6.7	silty CLAY to CLAY	115	1.5	21	45	-	-	4.4	15
44.95	53.5	24.8	-	4.3	-1.2	8.4	silty CLAY to CLAY	115	1.5	17	36	-	-	3.4	15
45.11	72.4	33.5	-	4.8	-1.2	6.9	silty CLAY to CLAY	115	1.5	22	48	-	-	4.7	15
45.28	71.0	32.8	-	4.8	-1.2	7.0	silty CLAY to CLAY	115	1.5	22	47	-	-	4.6	15
45.44	40.3	18.6	-	3.7	-1.2	9.9	silty CLAY to CLAY	115	1.5	12	27	-	-	2.5	15
45.61	67.0	30.9	-	3.0	-1.2	4.6	silty CLAY to CLAY	115	1.5	21	45	-	-	4.3	15
45.77	88.7	40.8	-	4.1	-1.1	4.7	clayy SILT to silty CLAY	115	2.0	20	44	-	-	5.8	15
45.93	58.7	27.0	-	4.8	-1.2	8.6	silty CLAY to CLAY	115	1.5	18	39	-	-	3.8	15
46.10	80.0	36.6	-	5.0	-1.2	6.5	silty CLAY to CLAY	115	1.5	24	53	-	-	5.2	15
46.26	88.0	40.2	-	5.5	-1.1	6.5	silty CLAY to CLAY	115	1.5	27	59	-	-	5.7	15
46.43	72.0	32.8	-	5.2	-1.2	7.5	silty CLAY to CLAY	115	1.5	22	48	-	-	4.7	15
46.59	61.4	27.9	-	4.1	-1.2	7.1	silty CLAY to CLAY	115	1.5	19	41	-	-	3.9	15
46.75	57.0	25.9	-	3.2	-1.2	5.9	silty CLAY to CLAY	115	1.5	17	38	-	-	3.7	15
46.92	39.6	18.0	-	2.0	-1.2	5.4	silty CLAY to CLAY	115	1.5	12	26	-	-	2.5	15
47.08	30.7	13.9	-	1.5	-1.2	5.4	silty CLAY to CLAY	115	1.5	9	20	-	-	1.9	15
47.25	31.2	14.1	-	2.3	-1.2	8.2	silty CLAY to CLAY	115	1.5	9	21	-	-	1.9	15
47.41	55.0	24.8	-	5.6	-1.2	9.9	silty CLAY to CLAY	115	1.5	17	37	-	-	3.5	15
47.57	95.2	42.9	-	6.4	-1.2	6.9	silty CLAY to CLAY	115	1.5	29	63	-	-	6.2	15
47.74	93.2	41.9	-	6.0	-1.2	6.7	silty CLAY to CLAY	115	1.5	28	62	-	-	6.1	15
47.90	59.1	26.5	-	4.3	-1.3	7.6	silty CLAY to CLAY	115	1.5	18	39	-	-	3.8	15
48.07	68.1	30.5	-	5.1	-1.3	7.7	silty CLAY to CLAY	115	1.5	20	45	-	-	4.4	15
48.23	83.1	37.1	-	6.2	-1.2	7.7	silty CLAY to CLAY	115	1.5	25	55	-	-	5.4	15
48.39	148.2	96.1	216.7	6.3	-1.1	4.4	very stiff fine SOIL	120	2.0	48	74	66	38	-	30
48.56	196.7	127.4	216.5	6.4	-1.1	3.3	silty SAND to sandy SILT	120	4.0	32	49	75	40	-	16
48.72	220.1	142.4	227.6	6.9	-1.0	3.2	silty SAND to sandy SILT	120	4.0	36	55	79	40	-	16
48.89	224.3	145.0	217.5	6.2	-1.1	2.8	silty SAND to sandy SILT	120	4.0	36	56	79	40	-	16
49.05	225.2	145.5	209.0	5.7	-1.1	2.5	silty SAND to sandy SILT	120	4.0	36	56	79	40	-	16
49.22	220.6	142.3	214.0	6.1	-1.0	2.8	silty SAND to sandy SILT	120	4.0	36	55	79	40	-	16
49.38	195.6	126.0	238.5	7.7	-1.0	4.0	stiff SAND to clayy SAND	115	1.0	100	100	-	-	12.1	16
49.54	144.9	93.3	245.3	7.8	-1.1	5.5	very stiff fine SOIL	120	2.0	47	72	65	38	-	30
49.71	75.3	33.0	-	5.9	-1.1	8.1	silty CLAY to CLAY	115	1.5	22	50	-	-	4.9	15
49.87	51.8	22.7	-	3.7	-1.0	7.6	silty CLAY to CLAY	115	1.5	15	35	-	-	3.3	15
50.04	55.1	24.1	-	3.8	-1.0	7.3	silty CLAY to CLAY	115	1.5	16	37	-	-	3.5	15

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Pacific Materials Lab

Operator: JH-VO
Sounding: CPT-02
Cone Used: DSG0786

CPT Date/Time: 1/11/2006 10:37:54 AM
Location: Carrows Parking Lot
Job Number:



Maximum Depth = 50.52 feet

Depth Increment = 0.164 feet

1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

*Soil behavior type and SPT based on data from UBC-1983

Project ID: Pacific Materials Lab
Data File: SDF(365).cpt
CPT Date: 1/11/2006 10:37:54 AM
GW During Test: 30 ft

Sounding ID: CPT-02
Project No:
Cone/Rig: DSG0786

Depth ft	qc PS tsf	qc1n PS -	qincs PS -	Slv Stss tsf	pore prss (psi)	Frct Ratio %	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60%	SPT R-N 60%	Rel Den %	Ftn Ang deg	Und Shr tsf	Nk -
0.33	104.7	167.9	259.1	3.5	0.7	3.4	stiff SAND to clayy SAND	115	1.0	100	100	-	-	6.5	16
0.49	60.1	96.4	230.8	2.9	0.7	4.9	very stiff fine SOIL	120	2.0	48	30	66	48	-	30
0.66	43.5	69.8	173.6	1.7	0.7	4.0	clayy SILT to silty CLAY	115	2.0	35	22	-	-	2.9	15
0.82	29.9	48.0	-	1.4	0.8	4.7	clayy SILT to silty CLAY	115	2.0	24	15	-	-	2.0	15
0.98	33.5	53.8	161.8	1.5	0.8	4.3	clayy SILT to silty CLAY	115	2.0	27	17	-	-	2.2	15
1.15	33.1	53.0	172.6	1.6	0.8	4.9	clayy SILT to silty CLAY	115	2.0	27	17	-	-	2.2	15
1.31	32.8	52.6	-	1.8	0.7	5.4	clayy SILT to silty CLAY	115	2.0	26	16	-	-	2.2	15
1.48	33.9	54.4	-	1.9	0.7	5.5	clayy SILT to silty CLAY	115	2.0	27	17	-	-	2.3	15
1.64	32.5	52.2	-	1.8	0.6	5.6	silty CLAY to CLAY	115	1.5	35	22	-	-	2.2	15
1.80	28.8	46.2	-	1.6	0.6	5.7	silty CLAY to CLAY	115	1.5	31	19	-	-	1.9	15
1.97	27.3	43.9	-	1.8	0.6	6.7	silty CLAY to CLAY	115	1.5	29	18	-	-	1.8	15
2.13	30.6	49.1	-	2.2	0.6	7.2	silty CLAY to CLAY	115	1.5	33	20	-	-	2.0	15
2.30	30.3	48.6	-	2.4	0.6	8.1	silty CLAY to CLAY	115	1.5	32	20	-	-	2.0	15
2.46	32.5	52.1	-	2.5	0.5	7.6	silty CLAY to CLAY	115	1.5	35	22	-	-	2.2	15
2.62	34.2	54.8	-	2.6	0.5	7.7	silty CLAY to CLAY	115	1.5	37	23	-	-	2.3	15
2.79	35.6	57.2	-	2.8	0.5	7.8	silty CLAY to CLAY	115	1.5	38	24	-	-	2.4	15
2.95	37.4	59.9	-	2.9	0.5	7.9	very stiff fine SOIL	120	2.0	30	19	50	44	-	30
3.12	46.2	74.1	-	3.7	0.5	8.0	very stiff fine SOIL	120	2.0	37	23	57	45	-	30
3.28	70.3	112.8	339.1	5.5	0.5	7.8	very stiff fine SOIL	120	2.0	56	35	71	47	-	30
3.45	111.8	179.3	417.7	8.0	0.5	7.1	very stiff fine SOIL	120	2.0	90	56	86	48	-	30
3.61	136.0	218.1	466.9	9.5	0.5	7.0	very stiff fine SOIL	120	2.0	100	68	93	48	-	30
3.77	118.4	189.8	476.1	9.7	0.5	8.2	very stiff fine SOIL	120	2.0	95	59	88	48	-	30
3.94	110.4	177.0	441.5	8.6	0.5	7.8	very stiff fine SOIL	120	2.0	89	55	86	48	-	30
4.10	108.2	173.4	381.6	6.9	0.5	6.4	very stiff fine SOIL	120	2.0	87	54	85	48	-	30
4.27	108.6	174.2	333.7	5.6	0.5	5.1	very stiff fine SOIL	120	2.0	87	54	85	48	-	30
4.43	104.9	168.2	372.8	6.7	0.5	6.4	very stiff fine SOIL	120	2.0	84	52	84	47	-	30
4.59	103.8	166.4	382.6	6.9	0.5	6.7	very stiff fine SOIL	120	2.0	83	52	84	47	-	30
4.76	108.2	173.5	351.5	6.1	0.5	5.6	very stiff fine SOIL	120	2.0	87	54	85	47	-	30
4.92	94.0	150.8	286.2	4.3	0.4	4.6	very stiff fine SOIL	120	2.0	75	47	81	46	-	30
5.09	74.9	120.2	256.1	3.5	0.5	4.8	very stiff fine SOIL	120	2.0	60	37	73	45	-	30
5.25	74.4	119.4	239.4	3.2	0.4	4.3	very stiff fine SOIL	120	2.0	60	37	73	45	-	30
5.41	83.5	133.9	345.1	5.8	0.5	6.9	very stiff fine SOIL	120	2.0	67	42	77	45	-	30
5.58	117.3	188.1	436.2	8.5	0.4	7.3	very stiff fine SOIL	120	2.0	94	59	88	47	-	30
5.74	129.4	207.5	488.7	10.2	0.4	7.9	very stiff fine SOIL	120	2.0	100	65	91	47	-	30
5.91	119.2	191.2	458.7	9.2	0.4	7.7	very stiff fine SOIL	120	2.0	96	60	88	47	-	30
6.07	99.0	158.7	407.3	7.6	0.3	7.7	very stiff fine SOIL	120	2.0	79	49	82	46	-	30
6.23	91.8	147.1	353.0	6.0	0.3	6.6	very stiff fine SOIL	120	2.0	74	46	80	45	-	30
6.40	82.9	131.2	341.5	5.7	0.4	6.9	very stiff fine SOIL	120	2.0	66	41	76	44	-	30
6.56	62.9	98.2	297.3	4.5	0.3	7.2	very stiff fine SOIL	120	2.0	49	31	66	43	-	30
6.73	63.5	98.0	243.4	3.3	0.4	5.2	very stiff fine SOIL	120	2.0	49	32	66	43	-	30
6.89	82.7	126.0	247.4	3.5	0.4	4.3	very stiff fine SOIL	120	2.0	63	41	75	44	-	30
7.05	111.2	167.4	294.9	4.8	0.4	4.3	very stiff fine SOIL	120	2.0	84	56	84	45	-	30
7.22	127.3	189.5	355.5	6.6	0.4	5.2	very stiff fine SOIL	120	2.0	95	64	88	46	-	30
7.38	107.8	158.6	365.2	7.0	0.4	6.5	very stiff fine SOIL	120	2.0	79	54	82	45	-	30
7.55	91.3	132.7	361.6	6.8	0.4	7.5	very stiff fine SOIL	120	2.0	66	46	76	44	-	30
7.71	95.3	137.1	297.6	5.1	0.4	5.4	very stiff fine SOIL	120	2.0	69	48	77	44	-	30
7.87	123.1	175.3	288.6	4.8	0.4	3.9	stiff SAND to clayy SAND	115	1.0	100	100	-	-	7.7	16
8.04	136.3	192.0	288.7	4.7	0.5	3.5	stiff SAND to clayy SAND	115	1.0	100	100	-	-	8.5	16
8.20	133.8	186.8	293.9	5.0	0.5	3.8	stiff SAND to clayy SAND	115	1.0	100	100	-	-	8.3	16
8.37	135.1	186.7	289.5	4.9	0.5	3.7	stiff SAND to clayy SAND	115	1.0	100	100	-	-	8.4	16
8.53	139.1	190.5	284.4	4.7	0.5	3.4	stiff SAND to clayy SAND	115	1.0	100	100	-	-	8.7	16
8.69	167.1	226.7	319.7	5.6	0.6	3.4	stiff SAND to clayy SAND	115	1.0	100	100	-	-	10.4	16
8.86	169.9	228.4	319.6	5.6	0.6	3.3	stiff SAND to clayy SAND	115	1.0	100	100	-	-	10.6	16
9.02	134.1	178.7	272.0	4.6	0.6	3.4	stiff SAND to clayy SAND	115	1.0	100	100	-	-	8.3	16
9.19	118.4	156.3	230.1	3.4	0.6	2.9	silty SAND to sandy SILT	120	4.0	39	30	82	44	-	16
9.35	122.4	160.1	227.6	3.3	0.6	2.7	silty SAND to sandy SILT	120	4.0	40	31	83	45	-	16
9.51	135.2	175.4	239.1	3.5	0.6	2.6	silty SAND to sandy SILT	120	4.0	44	34	86	45	-	16
9.68	142.7	183.5	248.4	3.8	0.6	2.6	silty SAND to sandy SILT	120	4.0	46	36	87	45	-	16
9.84	142.4	181.5	247.6	3.8	0.6	2.7	silty SAND to sandy SILT	120	4.0	45	36	87	45	-	16
10.01	134.6	170.2	250.6	4.1	0.6	3.1	silty SAND to sandy SILT	120	4.0	43	34	85	45	-	16
10.17	131.0	164.3	232.2	3.5	0.7	2.7	silty SAND to sandy SILT	120	4.0	41	33	83	44	-	16
10.34	129.2	160.7	247.2	4.2	0.7	3.2	silty SAND to sandy SILT	120	4.0	40	32	83	44	-	16
10.50	159.9	197.3	278.9	4.9	0.7	3.1	stiff SAND to clayy SAND	115	1.0	100	100	-	-	10.0	16
10.66	179.9	220.3	348.1	7.6	0.7	4.2	very stiff fine SOIL	120	2.0	100	90	93	46	-	30

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Project ID: Pacific Materials Lab
Data File: SDF(365).cpt
CPT Date: 1/11/2006 10:37:54 AM
GW During Test: 30 ft

Sounding ID: CPT-02
Project No:
Cone/Rig: DSG0786

Depth ft	qc PS tsf	qc1n PS -	q1ncs PS -	Slv Stss tsf	pore prss (psi)	Frct Ratio %	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60%	SPT R-N 60%	Rel Den %	Ftn Ang deg	Und Shr tsf	Nk -
10.83	193.4	235.0	344.0	7.2	0.7	3.8	stiff SAND to clayy SAND	115	1.0	100	100	-	-	12.0	16
10.99	414.5	500.0	500.0	6.0	0.9	1.5	clean SAND to silty SAND	125	5.0	100	83	95	48	-	16
11.16	559.0	669.0	669.0	9.1	0.9	1.6	clean SAND to silty SAND	125	5.0	100	100	95	48	-	16
11.32	424.6	504.2	521.9	8.3	1.0	2.0	stiff SAND to clayy SAND	115	1.0	100	100	-	-	26.5	16
11.48	337.3	397.8	456.8	8.8	1.2	2.6	stiff SAND to clayy SAND	115	1.0	100	100	-	-	21.0	16
11.65	303.1	355.0	459.5	10.7	1.2	3.6	stiff SAND to clayy SAND	115	1.0	100	100	-	-	18.9	16
11.81	246.2	286.3	416.5	10.2	1.3	4.2	stiff SAND to clayy SAND	115	1.0	100	100	-	-	15.3	16
11.98	147.3	170.2	377.5	9.4	1.4	6.4	very stiff fine SOIL	120	2.0	85	74	85	44	-	30
12.14	130.3	149.5	283.1	5.9	1.7	4.5	very stiff fine SOIL	120	2.0	75	65	80	44	-	30
12.30	113.5	129.3	248.8	4.7	1.7	4.2	very stiff fine SOIL	120	2.0	65	57	75	43	-	30
12.47	97.2	110.0	220.7	3.9	1.7	4.0	very stiff fine SOIL	120	2.0	55	49	70	42	-	30
12.63	95.2	107.0	203.6	3.4	1.6	3.6	silty SAND to sandy SILT	120	4.0	27	24	69	42	-	16
12.80	96.0	107.3	199.1	3.2	1.6	3.4	silty SAND to sandy SILT	120	4.0	27	24	69	42	-	16
12.96	95.3	105.8	194.2	3.1	1.5	3.3	silty SAND to sandy SILT	120	4.0	26	24	69	42	-	16
13.12	91.5	100.9	189.5	3.0	1.4	3.3	silty SAND to sandy SILT	120	4.0	25	23	67	41	-	16
13.29	88.1	96.5	188.2	3.0	1.3	3.4	silty SAND to sandy SILT	120	4.0	24	22	66	41	-	16
13.45	84.7	92.3	189.5	3.0	1.3	3.6	silty SAND to sandy SILT	120	4.0	23	21	64	41	-	16
13.62	83.9	90.8	194.8	3.2	1.2	3.8	clayy SILT to silty CLAY	115	2.0	45	42	-	-	5.5	15
13.78	87.5	94.2	202.9	3.5	1.2	4.0	clayy SILT to silty CLAY	115	2.0	47	44	-	-	5.8	15
13.94	98.1	105.0	214.0	3.9	1.1	4.0	very stiff fine SOIL	120	2.0	52	49	69	41	-	30
14.11	112.9	120.1	226.5	4.3	1.1	3.8	stiff SAND to clayy SAND	115	1.0	100	100	-	-	7.0	16
14.27	115.1	121.8	226.4	4.3	1.1	3.8	stiff SAND to clayy SAND	115	1.0	100	100	-	-	7.1	16
14.44	117.3	123.4	231.9	4.5	1.0	3.9	stiff SAND to clayy SAND	115	1.0	100	100	-	-	7.3	16
14.60	117.7	123.2	242.2	4.9	1.0	4.2	very stiff fine SOIL	120	2.0	62	59	74	42	-	30
14.76	124.6	129.6	250.4	5.3	1.0	4.2	very stiff fine SOIL	120	2.0	65	62	76	42	-	30
14.93	133.9	138.5	256.9	5.5	0.9	4.1	very stiff fine SOIL	120	2.0	69	67	78	43	-	30
15.09	134.2	138.1	245.1	5.1	0.9	3.8	stiff SAND to clayy SAND	115	1.0	100	100	-	-	8.3	16
15.26	122.9	125.7	241.2	5.0	0.9	4.1	very stiff fine SOIL	120	2.0	63	61	75	42	-	30
15.42	130.8	133.1	248.1	5.3	0.9	4.1	stiff SAND to clayy SAND	115	1.0	100	100	-	-	8.1	16
15.58	129.2	130.8	256.6	5.6	0.8	4.4	very stiff fine SOIL	120	2.0	65	65	76	42	-	30
15.75	123.0	123.9	255.6	5.6	0.8	4.6	very stiff fine SOIL	120	2.0	62	62	74	42	-	30
15.91	110.7	110.9	244.4	5.2	0.8	4.7	very stiff fine SOIL	120	2.0	55	55	70	41	-	30
16.08	102.8	102.5	231.6	4.7	0.8	4.6	very stiff fine SOIL	120	2.0	51	51	68	41	-	30
16.24	100.2	99.4	230.1	4.7	0.8	4.7	very stiff fine SOIL	120	2.0	50	50	67	41	-	30
16.40	103.1	101.7	233.6	4.8	0.8	4.7	very stiff fine SOIL	120	2.0	51	52	68	41	-	30
16.57	117.2	115.1	238.8	5.1	0.8	4.4	very stiff fine SOIL	120	2.0	58	59	72	41	-	30
16.73	124.1	121.2	241.4	5.2	0.8	4.3	very stiff fine SOIL	120	2.0	61	62	73	42	-	30
16.90	120.1	116.7	237.3	5.1	0.8	4.3	very stiff fine SOIL	120	2.0	58	60	72	41	-	30
17.06	106.7	103.2	233.2	4.9	0.8	4.7	very stiff fine SOIL	120	2.0	52	53	68	41	-	30
17.23	110.2	106.0	266.4	6.2	0.8	5.6	very stiff fine SOIL	120	2.0	53	55	69	41	-	30
17.39	185.6	177.8	377.2	11.3	0.9	6.1	very stiff fine SOIL	120	2.0	89	93	86	44	-	30
17.55	333.3	317.6	416.6	11.5	0.9	3.5	stiff SAND to clayy SAND	115	1.0	100	100	-	-	20.8	16
17.72	228.6	216.9	320.0	8.3	0.9	3.6	stiff SAND to clayy SAND	115	1.0	100	100	-	-	14.2	16
17.88	153.0	144.5	285.0	7.2	0.8	4.8	very stiff fine SOIL	120	2.0	72	76	79	42	-	30
18.05	156.4	147.0	266.5	6.5	0.9	4.2	very stiff fine SOIL	120	2.0	74	78	80	43	-	30
18.21	170.3	159.4	251.1	5.7	0.9	3.4	stiff SAND to clayy SAND	115	1.0	100	100	-	-	10.6	16
18.37	201.1	187.4	227.0	3.8	1.0	1.9	clean SAND to silty SAND	125	5.0	37	40	88	44	-	16
18.54	221.1	205.0	248.4	4.5	1.1	2.1	clean SAND to silty SAND	125	5.0	41	44	91	44	-	16
18.70	216.0	199.4	253.0	5.0	1.2	2.3	silty SAND to sandy SILT	120	4.0	50	54	90	44	-	16
18.87	140.9	129.5	218.3	4.6	1.1	3.3	silty SAND to sandy SILT	120	4.0	32	35	76	42	-	16
19.03	104.7	95.8	181.7	3.3	1.0	3.2	silty SAND to sandy SILT	120	4.0	24	26	66	40	-	16
19.19	79.3	72.2	200.3	3.8	1.0	4.9	clayy SILT to silty CLAY	115	2.0	36	40	-	-	5.2	15
19.36	68.1	61.8	183.6	3.2	1.0	4.8	clayy SILT to silty CLAY	115	2.0	31	34	-	-	4.5	15
19.52	79.3	71.7	172.5	3.0	1.1	3.8	clayy SILT to silty CLAY	115	2.0	36	40	-	-	5.2	15
19.69	90.9	81.8	178.8	3.2	1.0	3.6	clayy SILT to silty CLAY	115	2.0	41	45	-	-	6.0	15
19.85	97.8	87.7	196.7	3.9	1.0	4.0	clayy SILT to silty CLAY	115	2.0	44	49	-	-	6.4	15
20.01	77.2	68.9	205.4	4.0	1.0	5.3	clayy SILT to silty CLAY	115	2.0	34	39	-	-	5.1	15
20.18	69.0	57.9	-	4.0	0.9	5.9	silty CLAY to CLAY	115	1.5	39	46	-	-	4.5	15
20.34	78.2	69.3	210.9	4.2	0.9	5.5	clayy SILT to silty CLAY	115	2.0	35	39	-	-	5.1	15
20.51	100.8	88.9	212.6	4.5	0.9	4.5	clayy SILT to silty CLAY	115	2.0	44	50	-	-	6.6	15
20.67	135.2	118.9	216.4	4.8	0.9	3.6	silty SAND to sandy SILT	120	4.0	30	34	73	41	-	16
20.83	202.1	176.9	213.1	3.6	0.9	1.8	clean SAND to silty SAND	125	5.0	35	40	86	43	-	16
21.00	243.9	212.6	281.9	6.7	0.7	2.8	stiff SAND to clayy SAND	115	1.0	100	100	-	-	15.2	16
21.16	131.5	114.2	224.4	5.2	0.7	4.0	stiff SAND to clayy SAND	115	1.0	100	100	-	-	8.1	16
21.33	32.5	25.8	-	3.3	0.7	9.9	silty CLAY to CLAY	115	1.5	17	22	-	-	2.1	15

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Project ID: Pacific Materials Lab
Data File: SDF(365).cpt
CPT Date: 1/11/2006 10:37:54 AM
GW During Test: 30 ft

Sounding ID: CPT-02
Project No:
Cone/Rig: DSG0786

Depth ft	qc PS tsf	qc1n PS -	qlncs PS -	Slv Stss tsf	pore prss (psi)	Frct Ratio %	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60%	SPT R-N 60%	Rel Den %	Ftn Ang deg	Und Shr tsf	Nk -
21.49	22.9	18.0	-	0.9	0.7	4.0	silty CLAY to CLAY	115	1.5	12	15	-	-	1.4	15
21.65	27.3	21.4	-	1.0	0.8	3.8	silty CLAY to CLAY	115	1.5	14	18	-	-	1.7	15
21.82	28.1	21.8	-	1.5	0.7	5.5	silty CLAY to CLAY	115	1.5	15	19	-	-	1.8	15
21.98	54.8	42.2	-	2.3	0.5	4.3	clayy SILT to silty CLAY	115	2.0	21	27	-	-	3.6	15
22.15	59.5	50.5	156.4	2.5	0.4	4.2	clayy SILT to silty CLAY	115	2.0	25	30	-	-	3.9	15
22.31	40.1	30.5	-	2.4	0.4	6.3	silty CLAY to CLAY	115	1.5	20	27	-	-	2.6	15
22.47	29.0	21.9	-	2.2	0.3	7.8	silty CLAY to CLAY	115	1.5	15	19	-	-	1.8	15
22.64	43.0	32.2	-	2.4	0.3	5.8	silty CLAY to CLAY	115	1.5	21	29	-	-	2.8	15
22.80	56.9	42.3	-	2.5	0.3	4.6	clayy SILT to silty CLAY	115	2.0	21	28	-	-	3.7	15
22.97	57.7	42.6	-	3.1	0.3	5.5	silty CLAY to CLAY	115	1.5	28	38	-	-	3.8	15
23.13	58.1	42.6	-	3.0	0.3	5.4	silty CLAY to CLAY	115	1.5	28	39	-	-	3.8	15
23.30	50.0	36.4	-	2.8	0.3	5.7	silty CLAY to CLAY	115	1.5	24	33	-	-	3.2	15
23.46	41.2	29.8	-	2.4	0.3	6.1	silty CLAY to CLAY	115	1.5	20	27	-	-	2.7	15
23.62	52.6	37.8	-	1.9	0.3	3.7	clayy SILT to silty CLAY	115	2.0	19	26	-	-	3.4	15
23.79	26.9	19.2	-	1.1	0.2	4.4	silty CLAY to CLAY	115	1.5	13	18	-	-	1.7	15
23.95	29.2	20.7	-	0.9	0.2	3.3	clayy SILT to silty CLAY	115	2.0	10	15	-	-	1.8	15
24.12	33.8	23.8	-	1.5	0.2	4.6	silty CLAY to CLAY	115	1.5	16	23	-	-	2.2	15
24.28	36.1	25.2	-	1.9	0.2	5.6	silty CLAY to CLAY	115	1.5	17	24	-	-	2.3	15
24.44	39.5	27.5	-	2.5	0.2	6.5	silty CLAY to CLAY	115	1.5	18	26	-	-	2.5	15
24.61	34.8	24.0	-	2.8	0.2	8.4	silty CLAY to CLAY	115	1.5	16	23	-	-	2.2	15
24.77	44.1	30.2	-	3.1	0.2	7.3	silty CLAY to CLAY	115	1.5	20	29	-	-	2.8	15
24.94	78.1	62.6	173.7	3.3	0.2	4.3	clayy SILT to silty CLAY	115	2.0	31	39	-	-	5.1	15
25.10	88.0	70.3	183.6	3.7	0.2	4.3	clayy SILT to silty CLAY	115	2.0	35	44	-	-	5.8	15
25.26	111.9	89.1	181.1	3.8	0.3	3.4	silty SAND to sandy SILT	120	4.0	22	28	63	39	-	16
25.43	101.3	80.4	188.0	4.0	0.3	4.0	clayy SILT to silty CLAY	115	2.0	40	51	-	-	6.7	15
25.59	90.1	71.3	163.5	3.1	0.2	3.5	clayy SILT to silty CLAY	115	2.0	36	45	-	-	5.9	15
25.76	92.3	72.8	160.6	3.0	0.3	3.3	clayy SILT to silty CLAY	115	2.0	36	46	-	-	6.0	15
25.92	76.5	60.2	158.7	2.8	0.3	3.8	clayy SILT to silty CLAY	115	2.0	30	38	-	-	5.0	15
26.08	84.7	66.4	160.7	3.0	0.3	3.6	clayy SILT to silty CLAY	115	2.0	33	42	-	-	5.5	15
26.25	87.0	68.0	167.7	3.2	0.3	3.8	clayy SILT to silty CLAY	115	2.0	34	43	-	-	5.7	15
26.41	89.9	70.1	167.3	3.2	0.3	3.7	clayy SILT to silty CLAY	115	2.0	35	45	-	-	5.9	15
26.58	100.2	77.8	158.9	3.0	0.4	3.0	silty SAND to sandy SILT	120	4.0	19	25	59	38	-	16
26.74	99.9	77.4	152.8	2.8	0.4	2.8	silty SAND to sandy SILT	120	4.0	19	25	59	38	-	16
26.90	101.3	78.2	155.0	2.9	0.4	2.9	silty SAND to sandy SILT	120	4.0	20	25	59	38	-	16
27.07	99.9	76.9	164.3	3.2	0.4	3.3	silty SAND to sandy SILT	120	4.0	19	25	58	38	-	16
27.23	97.3	74.7	177.1	3.7	0.4	3.8	clayy SILT to silty CLAY	115	2.0	37	49	-	-	6.4	15
27.40	100.7	77.0	180.3	3.8	0.4	3.9	clayy SILT to silty CLAY	115	2.0	39	50	-	-	6.6	15
27.56	103.6	79.0	172.0	3.5	0.4	3.5	clayy SILT to silty CLAY	115	2.0	40	52	-	-	6.8	15
27.72	105.9	80.6	164.0	3.3	0.4	3.1	silty SAND to sandy SILT	120	4.0	20	26	60	38	-	16
27.89	118.1	89.6	149.5	2.7	0.5	2.3	silty SAND to sandy SILT	120	4.0	22	30	63	39	-	16
28.05	113.7	86.0	181.8	4.0	0.4	3.6	clayy SILT to silty CLAY	115	2.0	43	57	-	-	7.5	15
28.22	156.3	117.9	223.1	5.9	0.5	3.8	stiff SAND to clayy SAND	115	1.0	100	100	-	-	9.7	16
28.38	223.7	168.2	247.7	6.7	0.4	3.0	silty SAND to sandy SILT	120	4.0	42	56	84	42	-	16
28.54	141.5	106.1	206.9	5.2	0.5	3.7	silty SAND to sandy SILT	120	4.0	27	35	69	40	-	16
28.71	109.4	81.8	168.9	3.5	0.5	3.3	silty SAND to sandy SILT	120	4.0	20	27	60	38	-	16
28.87	92.0	68.6	148.5	2.7	0.5	3.0	silty SAND to sandy SILT	120	4.0	17	23	55	37	-	16
29.04	46.4	27.2	-	1.9	0.5	4.2	silty CLAY to CLAY	115	1.5	18	31	-	-	3.0	15
29.20	19.7	11.4	-	0.9	0.5	4.9	silty CLAY to CLAY	115	1.5	8	13	-	-	1.2	15
29.36	10.3	6.0	-	0.6	0.5	7.2	silty CLAY to CLAY	115	1.5	4	7	-	-	0.6	15
29.53	12.6	7.2	-	0.7	0.5	6.2	silty CLAY to CLAY	115	1.5	5	8	-	-	0.7	15
29.69	12.7	7.3	-	0.6	0.5	5.7	silty CLAY to CLAY	115	1.5	5	8	-	-	0.7	15
29.86	14.7	8.4	-	0.5	0.5	3.9	silty CLAY to CLAY	115	1.5	6	10	-	-	0.9	15
30.02	17.1	9.7	-	0.6	0.4	4.1	silty CLAY to CLAY	115	1.5	6	11	-	-	1.0	15
30.19	25.4	14.4	-	0.6	0.5	2.6	clayy SILT to silty CLAY	115	2.0	7	13	-	-	1.6	15
30.35	22.8	12.9	-	0.5	0.4	2.4	silty CLAY to CLAY	115	1.5	9	15	-	-	1.4	15
30.51	19.4	11.0	-	0.4	0.4	2.4	silty CLAY to CLAY	115	1.5	7	13	-	-	1.2	15
30.68	17.4	9.8	-	0.4	0.4	2.7	silty CLAY to CLAY	115	1.5	7	12	-	-	1.0	15
30.84	16.1	9.1	-	0.4	0.3	2.9	silty CLAY to CLAY	115	1.5	6	11	-	-	1.0	15
31.01	16.5	9.3	-	0.6	0.3	4.3	silty CLAY to CLAY	115	1.5	6	11	-	-	1.0	15
31.17	22.5	12.6	-	1.6	0.3	7.8	silty CLAY to CLAY	115	1.5	8	15	-	-	1.4	15
31.33	45.1	25.2	-	2.6	0.3	5.9	silty CLAY to CLAY	115	1.5	17	30	-	-	2.9	15
31.50	96.3	69.7	155.4	3.0	0.3	3.2	clayy SILT to silty CLAY	115	2.0	35	48	-	-	6.3	15
31.66	110.8	80.1	188.7	4.4	0.3	4.0	clayy SILT to silty CLAY	115	2.0	40	55	-	-	7.3	15
31.83	102.1	73.8	207.9	5.1	0.3	5.1	clayy SILT to silty CLAY	115	2.0	37	51	-	-	6.7	15
31.99	95.6	52.8	-	5.4	0.3	5.7	silty CLAY to CLAY	115	1.5	35	64	-	-	6.2	15

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Project ID: Pacific Materials Lab
Data File: SDF(365).cpt
CPT Date: 1/11/2006 10:37:54 AM
GW During Test: 30 ft

Sounding ID: CPT-02
Project No:
Cone/Rig: DSG0786

Depth ft	qc PS tsf	*qc1n PS -	q1ncs PS -	Slv Stss tsf	pore prss (psi)	Frct Rato %	*Material Behavior Description	Unit Wght pcf	Qc to N	*SPT R-N1 60%	SPT R-N 60%	*Rel Den %	*Ftn Ang deg	Und Shr tsf	*Nk -
32.15	95.7	52.7	-	5.1	0.3	5.4	clayy SILT to silty CLAY	115	2.0	26	48	-	-	6.3	15
32.32	69.2	38.0	-	4.5	0.2	6.7	silty CLAY to CLAY	115	1.5	25	46	-	-	4.5	15
32.48	47.4	26.0	-	3.3	0.2	7.3	silty CLAY to CLAY	115	1.5	17	32	-	-	3.0	15
32.65	32.2	17.6	-	2.4	0.2	7.8	silty CLAY to CLAY	115	1.5	12	21	-	-	2.0	15
32.81	28.7	15.7	-	3.0	0.2	9.9	silty CLAY to CLAY	115	1.5	10	19	-	-	1.8	15
32.97	51.6	28.1	-	4.3	0.3	8.6	silty CLAY to CLAY	115	1.5	19	34	-	-	3.3	15
33.14	105.2	57.1	-	5.6	0.3	5.5	clayy SILT to silty CLAY	115	2.0	29	53	-	-	6.9	15
33.30	111.3	79.6	219.8	5.7	0.3	5.2	very stiff fine SOIL	120	2.0	40	56	59	38	-	30
33.47	110.1	78.6	192.5	4.6	0.3	4.2	clayy SILT to silty CLAY	115	2.0	39	55	-	-	7.2	15
33.63	110.5	78.8	191.7	4.6	0.3	4.2	clayy SILT to silty CLAY	115	2.0	39	55	-	-	7.2	15
33.79	100.7	71.8	192.9	4.5	0.3	4.6	clayy SILT to silty CLAY	115	2.0	36	50	-	-	6.6	15
33.96	68.2	36.6	-	4.6	0.3	6.9	silty CLAY to CLAY	115	1.5	24	45	-	-	4.4	15
34.12	76.2	40.8	-	3.7	0.3	5.0	silty CLAY to CLAY	115	1.5	27	51	-	-	5.0	15
34.29	105.5	74.9	177.2	4.0	0.4	3.8	clayy SILT to silty CLAY	115	2.0	37	53	-	-	6.9	15
34.45	71.7	38.2	-	3.6	0.3	5.1	silty CLAY to CLAY	115	1.5	25	48	-	-	4.7	15
34.61	71.6	38.1	-	3.3	0.3	4.7	silty CLAY to CLAY	115	1.5	25	48	-	-	4.6	15
34.78	103.4	73.2	152.8	3.0	0.4	3.0	silty SAND to sandy SILT	120	4.0	18	26	57	37	-	16
34.94	118.5	83.7	149.5	2.9	0.4	2.5	silty SAND to sandy SILT	120	4.0	21	30	61	38	-	16
35.11	127.3	89.8	150.2	2.9	0.5	2.3	silty SAND to sandy SILT	120	4.0	22	32	63	38	-	16
35.27	124.5	87.8	149.5	2.9	0.5	2.4	silty SAND to sandy SILT	120	4.0	22	31	63	38	-	16
35.43	115.8	81.5	153.5	3.1	0.4	2.7	silty SAND to sandy SILT	120	4.0	20	29	60	38	-	16
35.60	113.1	79.5	155.6	3.2	0.4	2.9	silty SAND to sandy SILT	120	4.0	20	28	59	38	-	16
35.76	109.9	77.1	149.3	2.9	0.4	2.7	silty SAND to sandy SILT	120	4.0	19	27	58	37	-	16
35.93	102.9	72.2	147.3	2.8	0.4	2.8	silty SAND to sandy SILT	120	4.0	18	26	56	37	-	16
36.09	105.8	74.1	160.5	3.4	0.5	3.2	silty SAND to sandy SILT	120	4.0	19	26	57	37	-	16
36.26	120.0	83.9	177.2	4.1	0.5	3.5	silty SAND to sandy SILT	120	4.0	21	30	61	38	-	16
36.42	116.6	81.5	197.1	4.9	0.5	4.3	clayy SILT to silty CLAY	115	2.0	41	58	-	-	7.6	15
36.58	114.5	59.1	-	6.6	0.5	5.9	silty CLAY to CLAY	115	1.5	39	76	-	-	7.5	15
36.75	157.4	109.7	237.8	7.0	0.6	4.5	very stiff fine SOIL	120	2.0	55	79	70	39	-	30
36.91	131.9	91.9	217.7	5.9	0.5	4.6	very stiff fine SOIL	120	2.0	46	66	64	38	-	30
37.08	121.5	84.5	219.4	5.9	0.6	5.0	very stiff fine SOIL	120	2.0	42	61	61	38	-	30
37.24	130.5	90.6	242.4	7.1	0.6	5.5	very stiff fine SOIL	120	2.0	45	65	64	38	-	30
37.40	216.1	149.9	264.9	8.6	0.6	4.0	stiff SAND to clayy SAND	115	1.0	100	100	-	-	13.4	16
37.57	196.1	135.9	277.0	9.3	0.6	4.8	very stiff fine SOIL	120	2.0	68	98	77	41	-	30
37.73	157.4	108.9	294.6	10.0	0.6	6.4	very stiff fine SOIL	120	2.0	54	79	70	39	-	30
37.90	143.4	72.7	-	9.5	0.6	6.7	very stiff fine SOIL	120	2.0	36	72	56	39	-	30
38.06	117.1	59.2	-	8.5	0.7	7.4	silty CLAY to CLAY	115	1.5	39	78	-	-	7.7	15
38.22	181.7	125.3	245.8	7.6	0.8	4.2	very stiff fine SOIL	120	2.0	63	91	74	40	-	30
38.39	233.7	161.0	240.6	7.0	0.9	3.0	silty SAND to sandy SILT	120	4.0	40	58	83	41	-	16
38.55	234.0	161.0	239.4	6.9	0.9	3.0	silty SAND to sandy SILT	120	4.0	40	59	83	41	-	16
38.72	231.1	158.8	244.9	7.3	0.8	3.2	silty SAND to sandy SILT	120	4.0	40	58	82	41	-	16
38.88	221.3	151.9	224.1	6.2	0.8	2.8	silty SAND to sandy SILT	120	4.0	38	55	81	41	-	16
39.04	202.7	139.0	190.1	4.3	0.8	2.2	silty SAND to sandy SILT	120	4.0	35	51	78	41	-	16
39.21	165.1	113.1	171.9	3.8	0.8	2.3	silty SAND to sandy SILT	120	4.0	28	41	71	39	-	16
39.37	69.2	34.3	-	2.7	0.7	4.1	clayy SILT to silty CLAY	115	2.0	17	35	-	-	4.5	15
39.54	39.7	19.7	-	1.3	0.7	3.3	silty CLAY to CLAY	115	1.5	13	26	-	-	2.5	15
39.70	34.9	17.2	-	0.4	0.7	1.3	clayy SILT to silty CLAY	115	2.0	9	17	-	-	2.2	15
39.86	34.1	16.8	-	0.5	0.7	1.7	clayy SILT to silty CLAY	115	2.0	8	17	-	-	2.1	15
40.03	34.0	16.7	-	0.7	0.7	2.1	clayy SILT to silty CLAY	115	2.0	8	17	-	-	2.1	15
40.19	32.4	15.9	-	0.7	0.7	2.4	clayy SILT to silty CLAY	115	2.0	8	16	-	-	2.0	15
40.36	29.0	14.2	-	0.5	0.6	1.9	clayy SILT to silty CLAY	115	2.0	7	14	-	-	1.8	15
40.52	27.5	13.5	-	0.6	0.6	2.3	clayy SILT to silty CLAY	115	2.0	7	14	-	-	1.7	15
40.68	26.8	13.1	-	0.7	0.5	3.0	silty CLAY to CLAY	115	1.5	9	18	-	-	1.6	15
40.85	29.3	14.3	-	0.7	0.5	2.8	silty CLAY to CLAY	115	1.5	10	20	-	-	1.8	15
41.01	26.7	13.0	-	0.7	0.5	2.8	silty CLAY to CLAY	115	1.5	9	18	-	-	1.6	15
41.18	24.9	12.1	-	0.7	0.5	3.2	silty CLAY to CLAY	115	1.5	8	17	-	-	1.5	15
41.34	23.9	11.5	-	0.6	0.4	2.9	silty CLAY to CLAY	115	1.5	8	16	-	-	1.5	15
41.50	24.7	11.9	-	0.4	0.2	1.8	clayy SILT to silty CLAY	115	2.0	6	12	-	-	1.5	15
41.67	26.8	12.9	-	1.2	0.2	4.8	silty CLAY to CLAY	115	1.5	9	18	-	-	1.6	15
41.83	37.4	18.0	-	2.8	0.2	8.1	silty CLAY to CLAY	115	1.5	12	25	-	-	2.4	15
42.00	87.9	42.2	-	4.3	0.3	5.0	silty CLAY to CLAY	115	1.5	28	59	-	-	5.7	15
42.16	88.8	42.5	-	4.4	0.3	5.1	silty CLAY to CLAY	115	1.5	28	59	-	-	5.8	15
42.32	55.0	26.3	-	3.5	0.2	6.7	silty CLAY to CLAY	115	1.5	18	37	-	-	3.5	15
42.49	50.6	24.1	-	3.6	0.3	7.4	silty CLAY to CLAY	115	1.5	16	34	-	-	3.2	15
42.65	54.0	25.7	-	4.0	0.3	7.9	silty CLAY to CLAY	115	1.5	17	36	-	-	3.5	15

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Project ID: Pacific Materials Lab
Data File: SDF(365).cpt
CPT Date: 1/11/2006 10:37:54 AM
GW During Test: 30 ft

Sounding ID: CPT-02
Project No:
Cone/Rig: DSG0786

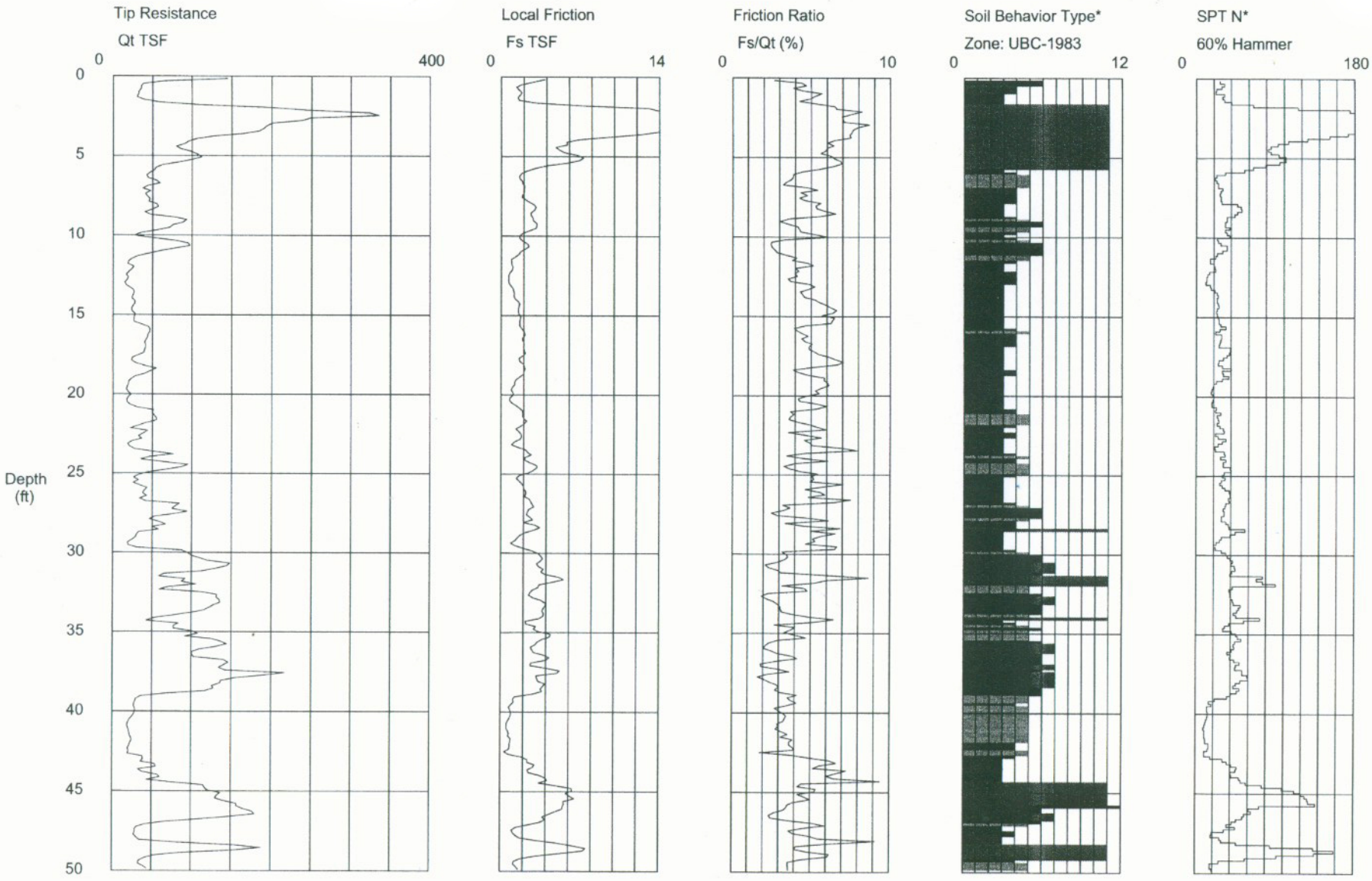
Depth ft	qc PS tsf	qc1n PS - *	q1ncs PS - *	Slv Stss tsf	pore prss (psi)	Frct Rato %	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60% *	SPT R-N 60%	Rel Den % *	Ftn Ang deg *	Und Shr tsf	Nk - *
42.82	53.7	25.5	-	3.9	0.3	7.6	silty CLAY to CLAY	115	1.5	17	36	-	-	3.4	15
42.98	44.8	21.2	-	3.5	0.3	8.2	silty CLAY to CLAY	115	1.5	14	30	-	-	2.8	15
43.15	34.6	16.4	-	2.9	0.3	9.0	silty CLAY to CLAY	115	1.5	11	23	-	-	2.2	15
43.31	73.1	34.5	-	3.5	0.3	5.0	silty CLAY to CLAY	115	1.5	23	49	-	-	4.7	15
43.47	96.3	64.2	173.7	3.9	0.4	4.2	clayy SILT to silty CLAY	115	2.0	32	48	-	-	6.3	15
43.64	118.5	78.9	162.0	3.6	0.4	3.1	silty SAND to sandy SILT	120	4.0	20	30	59	37	-	16
43.80	125.7	83.6	154.2	3.3	0.4	2.7	silty SAND to sandy SILT	120	4.0	21	31	61	38	-	16
43.97	137.6	91.4	158.1	3.4	0.4	2.6	silty SAND to sandy SILT	120	4.0	23	34	64	38	-	16
44.13	156.6	103.9	172.9	4.1	0.4	2.7	silty SAND to sandy SILT	120	4.0	26	39	68	39	-	16
44.29	168.3	111.6	171.3	3.9	0.5	2.4	silty SAND to sandy SILT	120	4.0	28	42	71	39	-	16
44.46	174.1	115.3	168.9	3.7	0.5	2.2	silty SAND to sandy SILT	120	4.0	29	44	72	39	-	16
44.62	154.2	102.0	164.5	3.7	0.5	2.4	silty SAND to sandy SILT	120	4.0	25	39	68	39	-	16
44.79	100.1	66.2	150.8	3.1	0.4	3.2	clayy SILT to silty CLAY	115	2.0	33	50	-	-	6.5	15
44.95	58.9	27.2	-	3.2	0.4	5.7	silty CLAY to CLAY	115	1.5	18	39	-	-	3.8	15
45.11	39.6	18.3	-	2.9	0.5	7.9	silty CLAY to CLAY	115	1.5	12	26	-	-	2.5	15
45.28	38.0	17.5	-	3.2	0.5	9.0	silty CLAY to CLAY	115	1.5	12	25	-	-	2.4	15
45.44	65.7	30.1	-	4.5	0.5	7.1	silty CLAY to CLAY	115	1.5	20	44	-	-	4.2	15
45.61	69.0	31.6	-	5.3	0.5	8.0	silty CLAY to CLAY	115	1.5	21	46	-	-	4.5	15
45.77	115.4	52.8	-	5.8	0.6	5.2	clayy SILT to silty CLAY	115	2.0	26	58	-	-	7.5	15
45.93	137.2	90.0	211.2	5.9	0.6	4.4	clayy SILT to silty CLAY	115	2.0	45	69	-	-	9.0	15
46.10	156.0	102.2	208.1	5.9	0.6	3.8	silty SAND to sandy SILT	120	4.0	26	39	68	39	-	16
46.26	182.1	119.2	194.5	5.1	0.6	2.9	silty SAND to sandy SILT	120	4.0	30	46	73	39	-	16
46.43	183.1	119.8	185.4	4.6	0.6	2.6	silty SAND to sandy SILT	120	4.0	30	46	73	39	-	16
46.59	175.2	114.5	192.3	5.1	0.6	2.9	silty SAND to sandy SILT	120	4.0	29	44	71	39	-	16
46.75	148.2	96.7	211.8	6.1	0.6	4.2	clayy SILT to silty CLAY	115	2.0	48	74	-	-	9.7	15
46.92	98.4	44.4	-	6.0	0.6	6.3	silty CLAY to CLAY	115	1.5	30	66	-	-	6.4	15
47.08	66.5	29.9	-	5.1	0.5	8.0	silty CLAY to CLAY	115	1.5	20	44	-	-	4.3	15
47.25	55.7	25.0	-	4.4	0.5	8.2	silty CLAY to CLAY	115	1.5	17	37	-	-	3.6	15
47.41	64.1	28.7	-	4.0	0.6	6.5	silty CLAY to CLAY	115	1.5	19	43	-	-	4.1	15
47.57	53.2	23.8	-	3.2	0.6	6.3	silty CLAY to CLAY	115	1.5	16	35	-	-	3.4	15
47.74	34.1	15.2	-	1.8	0.6	5.6	silty CLAY to CLAY	115	1.5	10	23	-	-	2.1	15
47.90	28.8	12.8	-	1.3	0.5	5.1	silty CLAY to CLAY	115	1.5	9	19	-	-	1.8	15
48.07	27.6	12.3	-	1.9	0.5	7.8	silty CLAY to CLAY	115	1.5	8	18	-	-	1.7	15
48.23	65.7	29.2	-	3.4	0.6	5.4	silty CLAY to CLAY	115	1.5	19	44	-	-	4.2	15
48.39	87.3	38.7	-	4.2	0.5	4.9	silty CLAY to CLAY	115	1.5	26	58	-	-	5.7	15
48.56	103.0	66.5	177.1	4.2	0.5	4.2	clayy SILT to silty CLAY	115	2.0	33	51	-	-	6.7	15
48.72	122.8	79.3	209.0	5.8	0.5	4.8	clayy SILT to silty CLAY	115	2.0	40	61	-	-	8.0	15
48.89	93.9	41.4	-	5.9	0.4	6.5	silty CLAY to CLAY	115	1.5	28	63	-	-	6.1	15
49.05	61.0	26.8	-	5.8	0.3	9.9	silty CLAY to CLAY	115	1.5	18	41	-	-	3.9	15
49.22	112.3	49.3	-	5.3	0.4	4.8	clayy SILT to silty CLAY	115	2.0	25	56	-	-	7.3	15
49.38	143.1	92.0	210.0	6.0	0.5	4.3	clayy SILT to silty CLAY	115	2.0	46	72	-	-	9.4	15
49.54	146.3	93.9	219.8	6.5	0.5	4.5	very stiff fine SOIL	120	2.0	47	73	65	38	-	30
49.71	141.6	90.8	225.6	6.8	0.5	4.9	very stiff fine SOIL	120	2.0	45	71	64	38	-	30
49.87	130.7	83.8	225.0	6.6	0.5	5.2	very stiff fine SOIL	120	2.0	42	65	61	37	-	30
50.04	96.0	41.7	-	5.7	0.5	6.2	silty CLAY to CLAY	115	1.5	28	64	-	-	6.2	15
50.20	65.3	28.3	-	5.4	0.4	8.6	silty CLAY to CLAY	115	1.5	19	44	-	-	4.2	15

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Pacific Materials Lab

Operator: JH-VO
Sounding: CPT-03
Cone Used: DSG0786

CPT Date/Time: 1/11/2006 11:22:57 AM
Location: Carrows Parking Lot
Job Number:



Maximum Depth = 50.52 feet

Depth Increment = 0.164 feet

1 sensitive fine grained
2 organic material
3 clay
4 silty clay to clay
5 clayey silt to silty clay
6 sandy silt to clayey silt
7 silty sand to sandy silt
8 sand to silty sand
9 sand
10 gravelly sand to sand
11 very stiff fine grained (*)
12 sand to clayey sand (*)

*Soil behavior type and SPT based on data from UBC-1983

Holguin, Fahan & Associates, Inc.

Project ID: Pacific Materials Lab
Data File: SDF(366).cpt
CPT Date: 1/11/2006 11:22:57 AM
GW During Test: 30 ft

Sounding ID: CPT-03
Project No:
Cone/Rig: DSG0786

Depth ft	qc PS tsf	qc1n PS -	q1ncs PS -	Slv Stss tsf	pore prss (psi)	Frct Ratio %	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60%	SPT R-N 60%	Rel Den %	Ftn Ang deg	Und Shr tsf	Nk -
0.33	64.5	103.4	225.4	2.8	0.5	4.4	very stiff fine SOIL	120	2.0	52	32	68	48	-	30
0.49	37.9	60.7	179.3	1.8	0.6	4.7	clayy SILT to silty CLAY	115	2.0	30	19	-	-	2.5	15
0.66	35.6	57.1	156.2	1.4	0.6	3.9	clayy SILT to silty CLAY	115	2.0	29	18	-	-	2.4	15
0.82	35.4	56.8	169.6	1.6	0.7	4.5	clayy SILT to silty CLAY	115	2.0	28	18	-	-	2.4	15
0.98	32.3	51.9	-	1.8	0.1	5.7	silty CLAY to CLAY	115	1.5	35	22	-	-	2.2	15
1.15	32.1	51.5	-	1.7	0.1	5.3	clayy SILT to silty CLAY	115	2.0	26	16	-	-	2.1	15
1.31	30.1	48.2	-	1.5	0.1	5.0	clayy SILT to silty CLAY	115	2.0	24	15	-	-	2.0	15
1.48	37.8	60.7	169.7	1.6	0.1	4.3	clayy SILT to silty CLAY	115	2.0	30	19	-	-	2.5	15
1.64	57.7	92.5	240.4	3.1	0.2	5.4	very stiff fine SOIL	120	2.0	46	29	64	48	-	30
1.80	108.7	174.3	387.5	7.1	0.1	6.5	very stiff fine SOIL	120	2.0	87	54	85	48	-	30
1.97	197.7	317.1	579.3	13.1	0.2	6.6	very stiff fine SOIL	120	2.0	100	99	95	48	-	30
2.13	243.5	390.4	773.8	20.1	0.2	8.3	very stiff fine SOIL	120	2.0	100	100	95	48	-	30
2.30	323.8	519.3	906.7	24.5	0.3	7.6	very stiff fine SOIL	120	2.0	100	100	95	48	-	30
2.46	335.7	538.4	886.1	23.4	0.3	7.0	very stiff fine SOIL	120	2.0	100	100	95	48	-	30
2.62	249.4	399.9	710.9	17.5	0.3	7.0	very stiff fine SOIL	120	2.0	100	100	95	48	-	30
2.79	238.1	381.8	691.0	16.9	0.3	7.1	very stiff fine SOIL	120	2.0	100	100	95	48	-	30
2.95	201.2	322.7	701.9	17.5	0.6	8.7	very stiff fine SOIL	120	2.0	100	100	95	48	-	30
3.12	194.2	311.5	645.2	15.5	0.7	8.0	very stiff fine SOIL	120	2.0	100	97	95	48	-	30
3.28	190.5	305.4	620.5	14.6	0.7	7.7	very stiff fine SOIL	120	2.0	100	95	95	48	-	30
3.45	185.0	296.6	603.2	14.0	0.6	7.6	very stiff fine SOIL	120	2.0	100	92	95	48	-	30
3.61	165.5	265.4	553.3	12.3	0.5	7.5	very stiff fine SOIL	120	2.0	100	83	95	48	-	30
3.77	127.4	204.3	470.5	9.6	0.4	7.6	very stiff fine SOIL	120	2.0	100	64	91	48	-	30
3.94	106.3	170.5	381.0	6.9	0.4	6.5	very stiff fine SOIL	120	2.0	85	53	85	48	-	30
4.10	96.0	153.9	343.2	5.8	0.3	6.1	very stiff fine SOIL	120	2.0	77	48	81	47	-	30
4.27	90.6	145.2	346.0	5.9	0.2	6.5	very stiff fine SOIL	120	2.0	73	45	79	47	-	30
4.43	80.2	128.7	308.5	4.8	0.2	6.0	very stiff fine SOIL	120	2.0	64	40	75	46	-	30
4.59	86.9	139.3	320.1	5.2	0.1	6.0	very stiff fine SOIL	120	2.0	70	43	78	46	-	30
4.76	99.6	159.7	335.2	5.6	0.1	5.6	very stiff fine SOIL	120	2.0	80	50	82	47	-	30
4.92	107.5	172.3	376.7	6.8	0.0	6.3	very stiff fine SOIL	120	2.0	86	54	85	47	-	30
5.09	112.4	180.3	394.4	7.3	-0.1	6.5	very stiff fine SOIL	120	2.0	90	56	86	47	-	30
5.25	100.2	160.7	382.9	6.9	-0.1	6.9	very stiff fine SOIL	120	2.0	80	50	83	46	-	30
5.41	83.9	134.6	347.0	5.8	-0.1	7.0	very stiff fine SOIL	120	2.0	67	42	77	45	-	30
5.58	64.6	103.6	286.0	4.1	-0.1	6.4	very stiff fine SOIL	120	2.0	52	32	68	44	-	30
5.74	54.8	87.8	239.7	3.0	-0.1	5.6	very stiff fine SOIL	120	2.0	44	27	63	43	-	30
5.91	52.5	84.1	204.9	2.3	-0.1	4.5	clayy SILT to silty CLAY	115	2.0	42	26	-	-	3.5	15
6.07	46.9	75.2	179.4	1.8	-0.1	3.9	clayy SILT to silty CLAY	115	2.0	38	23	-	-	3.1	15
6.23	42.6	68.0	170.3	1.6	-0.1	3.9	clayy SILT to silty CLAY	115	2.0	34	21	-	-	2.8	15
6.40	44.4	70.1	169.9	1.7	-0.1	3.8	clayy SILT to silty CLAY	115	2.0	35	22	-	-	2.9	15
6.56	55.3	86.1	178.9	1.9	-0.1	3.5	silty SAND to sandy SILT	120	4.0	22	14	62	42	-	16
6.73	59.7	91.8	178.8	1.9	-0.1	3.3	silty SAND to sandy SILT	120	4.0	23	15	64	43	-	16
6.89	44.7	67.9	190.8	2.1	-0.1	4.7	clayy SILT to silty CLAY	115	2.0	34	22	-	-	3.0	15
7.05	37.3	59.9	196.9	2.0	-0.1	5.5	clayy SILT to silty CLAY	115	2.0	30	19	-	-	2.5	15
7.22	47.8	71.0	186.3	2.1	-0.1	4.4	clayy SILT to silty CLAY	115	2.0	36	24	-	-	3.2	15
7.38	40.8	60.0	182.0	1.9	-0.1	4.8	clayy SILT to silty CLAY	115	2.0	30	20	-	-	2.7	15
7.55	43.6	63.4	175.0	1.9	-0.1	4.3	clayy SILT to silty CLAY	115	2.0	32	22	-	-	2.9	15
7.71	46.8	67.3	189.1	2.2	-0.1	4.7	clayy SILT to silty CLAY	115	2.0	34	23	-	-	3.1	15
7.87	45.3	64.5	208.0	2.6	0.0	5.7	clayy SILT to silty CLAY	115	2.0	32	23	-	-	3.0	15
8.04	55.5	78.2	220.4	3.0	0.0	5.4	very stiff fine SOIL	120	2.0	39	28	59	41	-	30
8.20	57.5	80.3	224.5	3.1	0.0	5.4	very stiff fine SOIL	120	2.0	40	29	60	41	-	30
8.37	49.8	68.8	220.9	2.9	0.0	6.0	very stiff fine SOIL	120	2.0	34	25	55	41	-	30
8.53	40.2	64.5	-	2.6	0.0	6.7	very stiff fine SOIL	120	2.0	32	20	53	39	-	30
8.69	47.5	64.3	207.4	2.7	0.0	5.7	clayy SILT to silty CLAY	115	2.0	32	24	-	-	3.1	15
8.86	77.8	104.5	203.6	2.8	0.1	3.6	silty SAND to sandy SILT	120	4.0	26	19	68	43	-	16
9.02	93.6	124.5	205.8	2.9	0.1	3.1	silty SAND to sandy SILT	120	4.0	31	23	74	43	-	16
9.19	88.4	116.5	214.6	3.2	0.1	3.6	silty SAND to sandy SILT	120	4.0	29	22	72	43	-	16
9.35	75.9	99.2	214.6	3.2	0.1	4.2	very stiff fine SOIL	120	2.0	50	38	67	42	-	30
9.51	72.4	93.7	211.2	3.1	0.1	4.3	clayy SILT to silty CLAY	115	2.0	47	36	-	-	4.8	15
9.68	56.5	72.6	188.8	2.5	0.1	4.4	clayy SILT to silty CLAY	115	2.0	36	28	-	-	3.7	15
9.84	36.0	51.7	-	1.9	0.1	5.3	clayy SILT to silty CLAY	115	2.0	26	18	-	-	2.4	15
10.01	26.7	42.8	-	1.6	0.0	6.3	silty CLAY to CLAY	115	1.5	29	18	-	-	1.7	15
10.17	49.9	62.6	152.3	1.7	0.1	3.4	clayy SILT to silty CLAY	115	2.0	31	25	-	-	3.3	15
10.34	78.4	97.5	162.0	2.0	0.1	2.5	silty SAND to sandy SILT	120	4.0	24	20	66	42	-	16
10.50	94.9	117.1	179.4	2.3	0.2	2.5	silty SAND to sandy SILT	120	4.0	29	24	72	43	-	16
10.66	97.6	119.4	184.4	2.5	0.1	2.6	silty SAND to sandy SILT	120	4.0	30	24	73	43	-	16

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Holguin, Fahan & Associates, Inc.

Project ID: Pacific Materials Lab
Data File: SDF(366).cpt
CPT Date: 1/11/2006 11:22:57 AM
GW During Test: 30 ft

Sounding ID: CPT-03
Project No:
Cone/Rig: DSG0786

Depth ft	qc PS tsf	qc1n PS -	qincs PS -	Slv Stss tsf	pore prss (psi)	Frct Rato %	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60%	SPT R-N 60%	Rel Den %	Ftn Ang deg	Und Shr tsf	Nk -
10.83	79.0	95.9	167.2	2.1	0.1	2.7	silty SAND to sandy SILT	120	4.0	24	20	66	42	-	16
10.99	60.5	72.9	149.5	1.7	0.1	2.9	silty SAND to sandy SILT	120	4.0	18	15	57	40	-	16
11.16	45.8	54.8	146.0	1.6	0.1	3.5	clayy SILT to silty CLAY	115	2.0	27	23	-	-	3.0	15
11.32	31.1	40.5	-	1.3	0.1	4.2	clayy SILT to silty CLAY	115	2.0	20	16	-	-	2.0	15
11.48	23.9	35.3	-	0.9	0.1	3.9	clayy SILT to silty CLAY	115	2.0	18	12	-	-	1.6	15
11.65	19.6	28.5	-	0.9	0.1	5.0	silty CLAY to CLAY	115	1.5	19	13	-	-	1.3	15
11.81	18.8	26.9	-	1.0	0.1	5.4	silty CLAY to CLAY	115	1.5	18	13	-	-	1.2	15
11.98	26.5	37.6	-	1.1	0.0	4.1	clayy SILT to silty CLAY	115	2.0	19	13	-	-	1.7	15
12.14	23.8	33.3	-	1.0	0.0	4.4	clayy SILT to silty CLAY	115	2.0	17	12	-	-	1.5	15
12.30	20.1	27.8	-	0.8	0.0	4.1	silty CLAY to CLAY	115	1.5	19	13	-	-	1.3	15
12.47	16.7	22.8	-	0.7	0.0	4.3	silty CLAY to CLAY	115	1.5	15	11	-	-	1.1	15
12.63	19.4	26.0	-	0.7	0.0	3.7	clayy SILT to silty CLAY	115	2.0	13	10	-	-	1.2	15
12.80	18.1	24.0	-	0.7	0.0	3.9	silty CLAY to CLAY	115	1.5	16	12	-	-	1.2	15
12.96	14.9	19.5	-	0.7	0.0	5.1	silty CLAY to CLAY	115	1.5	13	10	-	-	0.9	15
13.12	16.9	21.9	-	0.9	0.0	5.5	silty CLAY to CLAY	115	1.5	15	11	-	-	1.1	15
13.29	22.1	28.3	-	1.1	0.0	5.0	silty CLAY to CLAY	115	1.5	19	15	-	-	1.4	15
13.45	26.2	33.1	-	1.1	0.1	4.5	silty CLAY to CLAY	115	1.5	22	17	-	-	1.7	15
13.62	26.7	33.3	-	1.2	0.0	4.6	silty CLAY to CLAY	115	1.5	22	18	-	-	1.7	15
13.78	25.1	31.0	-	1.2	0.0	4.8	silty CLAY to CLAY	115	1.5	21	17	-	-	1.6	15
13.94	23.9	29.2	-	1.3	0.0	5.4	silty CLAY to CLAY	115	1.5	19	16	-	-	1.5	15
14.11	27.5	33.2	-	1.5	0.1	5.7	silty CLAY to CLAY	115	1.5	22	18	-	-	1.8	15
14.27	28.1	33.5	-	1.7	0.1	6.1	silty CLAY to CLAY	115	1.5	22	19	-	-	1.8	15
14.44	25.2	29.7	-	1.6	0.1	6.5	silty CLAY to CLAY	115	1.5	20	17	-	-	1.6	15
14.60	23.4	27.4	-	1.6	0.1	6.9	silty CLAY to CLAY	115	1.5	18	16	-	-	1.5	15
14.76	24.2	27.9	-	1.5	0.1	6.7	silty CLAY to CLAY	115	1.5	19	16	-	-	1.6	15
14.93	28.1	32.1	-	1.6	0.1	5.9	silty CLAY to CLAY	115	1.5	21	19	-	-	1.8	15
15.09	27.1	30.6	-	1.8	0.1	6.7	silty CLAY to CLAY	115	1.5	20	18	-	-	1.7	15
15.26	26.7	29.8	-	1.7	0.1	6.6	silty CLAY to CLAY	115	1.5	20	18	-	-	1.7	15
15.42	26.6	29.4	-	1.7	0.1	6.5	silty CLAY to CLAY	115	1.5	20	18	-	-	1.7	15
15.58	35.6	38.9	-	1.6	0.1	4.8	silty CLAY to CLAY	115	1.5	26	24	-	-	2.3	15
15.75	44.8	45.3	145.4	1.8	0.1	4.0	clayy SILT to silty CLAY	115	2.0	23	22	-	-	2.9	15
15.91	46.8	47.1	151.7	1.9	0.1	4.2	clayy SILT to silty CLAY	115	2.0	24	23	-	-	3.1	15
16.08	46.7	47.9	-	2.1	0.1	4.6	clayy SILT to silty CLAY	115	2.0	24	23	-	-	3.1	15
16.24	44.3	46.5	-	2.1	0.1	4.9	clayy SILT to silty CLAY	115	2.0	23	22	-	-	2.9	15
16.40	43.9	45.7	-	1.9	0.1	4.5	clayy SILT to silty CLAY	115	2.0	23	22	-	-	2.9	15
16.57	41.8	43.1	-	1.9	0.1	4.7	clayy SILT to silty CLAY	115	2.0	22	21	-	-	2.7	15
16.73	40.0	40.9	-	2.0	0.1	5.2	silty CLAY to CLAY	115	1.5	27	27	-	-	2.6	15
16.90	41.2	41.6	-	2.0	0.1	5.0	silty CLAY to CLAY	115	1.5	28	27	-	-	2.7	15
17.06	41.1	41.1	-	2.0	0.2	5.0	silty CLAY to CLAY	115	1.5	27	27	-	-	2.7	15
17.23	39.9	39.6	-	2.1	0.2	5.4	silty CLAY to CLAY	115	1.5	26	27	-	-	2.6	15
17.39	39.3	38.6	-	2.2	0.2	5.7	silty CLAY to CLAY	115	1.5	26	26	-	-	2.6	15
17.55	31.9	31.1	-	1.9	0.2	6.3	silty CLAY to CLAY	115	1.5	21	21	-	-	2.1	15
17.72	24.5	23.7	-	1.6	0.2	6.8	silty CLAY to CLAY	115	1.5	16	16	-	-	1.6	15
17.88	23.8	22.7	-	1.7	0.2	7.4	silty CLAY to CLAY	115	1.5	15	16	-	-	1.5	15
18.05	29.5	28.0	-	2.0	0.2	6.9	silty CLAY to CLAY	115	1.5	19	20	-	-	1.9	15
18.21	40.1	37.7	-	2.1	0.2	5.3	silty CLAY to CLAY	115	1.5	25	27	-	-	2.6	15
18.37	55.1	51.7	152.0	2.1	0.2	4.0	clayy SILT to silty CLAY	115	2.0	26	28	-	-	3.6	15
18.54	47.8	44.1	-	2.0	0.2	4.4	clayy SILT to silty CLAY	115	2.0	22	24	-	-	3.1	15
18.70	40.6	37.2	-	2.0	0.2	5.0	silty CLAY to CLAY	115	1.5	25	27	-	-	2.6	15
18.87	28.7	26.0	-	1.7	0.2	6.1	silty CLAY to CLAY	115	1.5	17	19	-	-	1.8	15
19.03	23.3	21.0	-	1.4	0.2	6.1	silty CLAY to CLAY	115	1.5	14	16	-	-	1.5	15
19.19	20.1	18.0	-	1.2	0.2	6.4	silty CLAY to CLAY	115	1.5	12	13	-	-	1.3	15
19.36	19.9	17.6	-	1.2	0.2	6.5	silty CLAY to CLAY	115	1.5	12	13	-	-	1.3	15
19.52	18.2	16.0	-	1.0	0.2	6.0	silty CLAY to CLAY	115	1.5	11	12	-	-	1.1	15
19.69	17.2	14.9	-	0.9	0.2	5.7	silty CLAY to CLAY	115	1.5	10	11	-	-	1.1	15
19.85	19.3	16.7	-	1.1	0.2	5.9	silty CLAY to CLAY	115	1.5	11	13	-	-	1.2	15
20.01	23.3	20.0	-	1.1	0.2	5.0	silty CLAY to CLAY	115	1.5	13	16	-	-	1.5	15
20.18	19.6	16.6	-	0.8	0.2	4.5	silty CLAY to CLAY	115	1.5	11	13	-	-	1.2	15
20.34	17.7	14.9	-	0.8	0.1	4.6	silty CLAY to CLAY	115	1.5	10	12	-	-	1.1	15
20.51	17.9	15.0	-	1.0	0.1	5.7	silty CLAY to CLAY	115	1.5	10	12	-	-	1.1	15
20.67	22.2	18.4	-	1.3	0.1	6.4	silty CLAY to CLAY	115	1.5	12	15	-	-	1.4	15
20.83	30.9	25.4	-	1.6	0.1	5.5	silty CLAY to CLAY	115	1.5	17	21	-	-	2.0	15
21.00	51.2	44.9	140.4	1.9	0.2	3.8	clayy SILT to silty CLAY	115	2.0	22	26	-	-	3.3	15
21.16	49.9	40.5	-	2.0	0.2	4.0	clayy SILT to silty CLAY	115	2.0	20	25	-	-	3.2	15
21.33	52.1	45.3	141.2	1.9	0.1	3.8	clayy SILT to silty CLAY	115	2.0	23	26	-	-	3.4	15

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Project ID: Pacific Materials Lab
Data File: SDF(366).cpt
CPT Date: 1/11/2006 11:22:57 AM
GW During Test: 30 ft

Sounding ID: CPT-03
Project No:
Cone/Rig: DSG0786

Depth ft	qc PS tsf	qcln PS -	qlncs PS -	Slv Stss tsf	pore prss (psi)	Frct Ratio %	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60%	SPT R-N 60%	Rel Den %	Ftn Ang deg	Und Shr tsf	Nk -
21.49	55.0	47.7	141.8	2.0	0.2	3.7	clayy SILT to silty CLAY	115	2.0	24	28	-	-	3.6	15
21.65	55.2	43.7	-	2.3	0.2	4.3	clayy SILT to silty CLAY	115	2.0	22	28	-	-	3.6	15
21.82	42.0	33.0	-	2.1	0.2	5.1	silty CLAY to CLAY	115	1.5	22	28	-	-	2.7	15
21.98	32.1	25.0	-	1.7	0.2	5.7	silty CLAY to CLAY	115	1.5	17	21	-	-	2.1	15
22.15	22.4	17.3	-	1.3	0.2	6.3	silty CLAY to CLAY	115	1.5	12	15	-	-	1.4	15
22.31	44.3	34.0	-	1.6	0.2	3.7	clayy SILT to silty CLAY	115	2.0	17	22	-	-	2.9	15
22.47	38.7	29.5	-	1.8	0.2	4.8	silty CLAY to CLAY	115	1.5	20	26	-	-	2.5	15
22.64	32.5	24.6	-	1.8	0.2	5.9	silty CLAY to CLAY	115	1.5	16	22	-	-	2.1	15
22.80	36.6	27.5	-	1.7	0.2	4.8	silty CLAY to CLAY	115	1.5	18	24	-	-	2.3	15
22.97	24.5	18.3	-	1.2	0.2	5.2	silty CLAY to CLAY	115	1.5	12	16	-	-	1.5	15
23.13	18.8	13.9	-	1.0	0.2	5.5	silty CLAY to CLAY	115	1.5	9	13	-	-	1.2	15
23.30	21.5	15.8	-	1.5	0.2	7.4	silty CLAY to CLAY	115	1.5	11	14	-	-	1.3	15
23.46	27.6	20.2	-	2.2	0.2	8.4	silty CLAY to CLAY	115	1.5	13	18	-	-	1.8	15
23.62	51.3	37.3	-	2.4	0.2	4.8	silty CLAY to CLAY	115	1.5	25	34	-	-	3.3	15
23.79	76.9	63.4	157.3	2.7	0.2	3.6	clayy SILT to silty CLAY	115	2.0	32	38	-	-	5.0	15
23.95	46.5	33.4	-	2.1	0.2	4.7	silty CLAY to CLAY	115	1.5	22	31	-	-	3.0	15
24.12	35.3	25.1	-	2.1	0.2	6.3	silty CLAY to CLAY	115	1.5	17	24	-	-	2.3	15
24.28	63.3	51.7	156.3	2.6	0.2	4.1	clayy SILT to silty CLAY	115	2.0	26	32	-	-	4.1	15
24.44	95.4	77.7	167.5	3.2	0.3	3.4	clayy SILT to silty CLAY	115	2.0	39	48	-	-	6.3	15
24.61	87.2	70.8	169.9	3.2	0.2	3.7	clayy SILT to silty CLAY	115	2.0	35	44	-	-	5.7	15
24.77	66.1	45.8	-	2.9	0.2	4.4	clayy SILT to silty CLAY	115	2.0	23	33	-	-	4.3	15
24.94	44.3	30.5	-	2.4	0.2	5.6	silty CLAY to CLAY	115	1.5	20	30	-	-	2.9	15
25.10	32.8	22.4	-	1.7	0.2	5.3	silty CLAY to CLAY	115	1.5	15	22	-	-	2.1	15
25.26	26.4	18.0	-	1.4	0.2	5.5	silty CLAY to CLAY	115	1.5	12	18	-	-	1.7	15
25.43	32.8	22.1	-	1.6	0.2	5.2	silty CLAY to CLAY	115	1.5	15	22	-	-	2.1	15
25.59	26.1	17.5	-	1.8	0.2	7.5	silty CLAY to CLAY	115	1.5	12	17	-	-	1.6	15
25.76	34.7	23.1	-	2.0	0.2	6.0	silty CLAY to CLAY	115	1.5	15	23	-	-	2.2	15
25.92	43.6	28.9	-	2.0	0.2	4.8	silty CLAY to CLAY	115	1.5	19	29	-	-	2.8	15
26.08	39.8	26.2	-	2.2	0.2	5.8	silty CLAY to CLAY	115	1.5	17	27	-	-	2.6	15
26.25	37.6	24.6	-	2.2	0.2	6.2	silty CLAY to CLAY	115	1.5	16	25	-	-	2.4	15
26.41	43.4	28.3	-	2.1	0.2	5.0	silty CLAY to CLAY	115	1.5	19	29	-	-	2.8	15
26.58	33.7	21.8	-	2.5	0.2	7.9	silty CLAY to CLAY	115	1.5	15	22	-	-	2.1	15
26.74	41.2	26.5	-	2.7	0.2	6.7	silty CLAY to CLAY	115	1.5	18	27	-	-	2.6	15
26.90	85.2	66.2	154.0	2.8	0.3	3.3	clayy SILT to silty CLAY	115	2.0	33	43	-	-	5.6	15
27.07	79.3	61.4	160.0	2.9	0.2	3.8	clayy SILT to silty CLAY	115	2.0	31	40	-	-	5.2	15
27.23	75.4	58.2	147.1	2.5	0.3	3.4	clayy SILT to silty CLAY	115	2.0	29	38	-	-	4.9	15
27.40	94.8	73.0	140.4	2.4	0.3	2.6	silty SAND to sandy SILT	120	4.0	18	24	57	38	-	16
27.56	78.9	60.5	139.3	2.3	0.2	3.0	clayy SILT to silty CLAY	115	2.0	30	39	-	-	5.2	15
27.72	53.4	33.1	-	2.6	0.2	5.0	silty CLAY to CLAY	115	1.5	22	36	-	-	3.5	15
27.89	46.3	28.6	-	2.8	0.2	6.4	silty CLAY to CLAY	115	1.5	19	31	-	-	3.0	15
28.05	58.7	36.0	-	2.0	0.2	3.5	clayy SILT to silty CLAY	115	2.0	18	29	-	-	3.8	15
28.22	67.2	41.0	-	3.1	0.3	4.7	clayy SILT to silty CLAY	115	2.0	20	34	-	-	4.4	15
28.38	50.7	30.7	-	3.5	0.2	7.1	silty CLAY to CLAY	115	1.5	20	34	-	-	3.3	15
28.54	58.4	35.2	-	3.0	0.2	5.2	silty CLAY to CLAY	115	1.5	23	39	-	-	3.8	15
28.71	33.0	19.8	-	2.2	0.2	6.9	silty CLAY to CLAY	115	1.5	13	22	-	-	2.1	15
28.87	30.2	18.0	-	1.7	0.2	6.0	silty CLAY to CLAY	115	1.5	12	20	-	-	1.9	15
29.04	28.9	17.1	-	1.5	0.2	5.5	silty CLAY to CLAY	115	1.5	11	19	-	-	1.8	15
29.20	24.4	14.4	-	1.3	0.2	5.7	silty CLAY to CLAY	115	1.5	10	16	-	-	1.5	15
29.36	19.1	11.2	-	0.9	0.2	5.2	silty CLAY to CLAY	115	1.5	7	13	-	-	1.2	15
29.53	19.5	11.3	-	1.3	0.2	7.3	silty CLAY to CLAY	115	1.5	8	13	-	-	1.2	15
29.69	30.5	17.7	-	2.0	0.2	6.9	silty CLAY to CLAY	115	1.5	12	20	-	-	1.9	15
29.86	87.5	64.6	151.2	2.8	0.3	3.3	clayy SILT to silty CLAY	115	2.0	32	44	-	-	5.7	15
30.02	95.5	70.3	164.8	3.3	0.3	3.6	clayy SILT to silty CLAY	115	2.0	35	48	-	-	6.2	15
30.19	99.5	73.2	170.1	3.6	0.2	3.6	clayy SILT to silty CLAY	115	2.0	37	50	-	-	6.5	15
30.35	110.5	81.2	173.0	3.7	0.3	3.4	silty SAND to sandy SILT	120	4.0	20	28	60	38	-	16
30.51	120.4	88.4	166.7	3.5	0.3	3.0	silty SAND to sandy SILT	120	4.0	22	30	63	38	-	16
30.68	148.6	108.9	162.4	3.2	0.3	2.2	silty SAND to sandy SILT	120	4.0	27	37	70	40	-	16
30.84	144.2	105.5	165.4	3.4	0.3	2.4	silty SAND to sandy SILT	120	4.0	26	36	69	39	-	16
31.01	130.5	95.4	173.4	3.8	0.3	2.9	silty SAND to sandy SILT	120	4.0	24	33	65	39	-	16
31.17	113.5	82.9	168.3	3.6	0.3	3.2	silty SAND to sandy SILT	120	4.0	21	28	61	38	-	16
31.33	65.4	36.8	-	3.9	0.2	6.2	silty CLAY to CLAY	115	1.5	25	44	-	-	4.2	15
31.50	58.8	33.0	-	5.1	0.4	9.0	silty CLAY to CLAY	115	1.5	22	39	-	-	3.8	15
31.66	92.3	51.7	-	5.6	0.4	6.2	silty CLAY to CLAY	115	1.5	34	62	-	-	6.0	15
31.83	87.6	48.9	-	4.6	0.4	5.3	silty CLAY to CLAY	115	1.5	33	58	-	-	5.7	15
31.99	106.2	77.0	164.1	3.4	0.4	3.3	silty SAND to sandy SILT	120	4.0	19	27	58	38	-	16

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Project ID: Pacific Materials Lab
Data File: SDF(366).cpt
CPT Date: 1/11/2006 11:22:57 AM
GW During Test: 30 ft

Sounding ID: CPT-03
Project No:
Cone/Rig: DSG0786

Depth ft	qc PS tsf	qcln PS -	qlncs PS -	Slv Stss tsf	pore prss (psi)	Frct Rato %	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60%	SPT R-N 60%	Rel Den %	Ftn Ang deg	Und Shr tsf	Nk -
32.15	71.7	39.9	-	3.3	0.4	4.8	clayy SILT to silty CLAY	115	2.0	20	36	-	-	4.7	15
32.32	59.4	33.0	-	2.9	0.3	5.0	silty CLAY to CLAY	115	1.5	22	40	-	-	3.8	15
32.48	113.1	81.8	142.6	2.6	0.4	2.3	silty SAND to sandy SILT	120	4.0	20	28	60	38	-	16
32.65	132.4	95.6	142.9	2.5	0.5	1.9	silty SAND to sandy SILT	120	4.0	24	33	66	39	-	16
32.81	131.1	94.5	150.7	2.9	0.4	2.2	silty SAND to sandy SILT	120	4.0	24	33	65	39	-	16
32.97	134.9	97.1	166.9	3.6	0.4	2.7	silty SAND to sandy SILT	120	4.0	24	34	66	39	-	16
33.14	136.2	97.9	176.5	4.0	0.4	3.0	silty SAND to sandy SILT	120	4.0	24	34	66	39	-	16
33.30	127.8	91.8	175.4	3.9	0.4	3.1	silty SAND to sandy SILT	120	4.0	23	32	64	39	-	16
33.47	121.9	87.4	171.8	3.8	0.4	3.2	silty SAND to sandy SILT	120	4.0	22	30	63	38	-	16
33.63	115.2	82.5	169.0	3.7	0.4	3.2	silty SAND to sandy SILT	120	4.0	21	29	61	38	-	16
33.79	99.4	71.1	175.1	3.8	0.4	3.9	clayy SILT to silty CLAY	115	2.0	36	50	-	-	6.5	15
33.96	76.2	41.2	-	3.8	0.4	5.1	silty CLAY to CLAY	115	1.5	27	51	-	-	5.0	15
34.12	53.0	28.6	-	3.4	0.4	6.7	silty CLAY to CLAY	115	1.5	19	35	-	-	3.4	15
34.29	42.8	23.0	-	2.2	0.4	5.5	silty CLAY to CLAY	115	1.5	15	29	-	-	2.7	15
34.45	83.8	59.7	134.1	2.3	0.4	2.8	silty SAND to sandy SILT	120	4.0	15	21	50	36	-	16
34.61	77.7	41.6	-	3.1	0.4	4.1	clayy SILT to silty CLAY	115	2.0	21	39	-	-	5.1	15
34.78	78.0	55.4	155.3	2.9	0.4	3.9	clayy SILT to silty CLAY	115	2.0	28	39	-	-	5.1	15
34.94	100.2	71.0	162.1	3.4	0.4	3.4	clayy SILT to silty CLAY	115	2.0	36	50	-	-	6.6	15
35.11	108.4	76.8	188.3	4.4	0.4	4.2	clayy SILT to silty CLAY	115	2.0	38	54	-	-	7.1	15
35.27	91.7	48.7	-	4.3	0.4	4.8	clayy SILT to silty CLAY	115	2.0	24	46	-	-	6.0	15
35.43	125.5	88.7	167.8	3.7	0.4	3.0	silty SAND to sandy SILT	120	4.0	22	31	63	38	-	16
35.60	137.6	97.2	158.7	3.3	0.4	2.4	silty SAND to sandy SILT	120	4.0	24	34	66	39	-	16
35.76	144.6	101.9	156.0	3.1	0.4	2.2	silty SAND to sandy SILT	120	4.0	25	36	68	39	-	16
35.93	131.2	92.4	144.2	2.7	0.4	2.1	silty SAND to sandy SILT	120	4.0	23	33	64	38	-	16
36.09	109.9	77.3	146.2	2.8	0.4	2.6	silty SAND to sandy SILT	120	4.0	19	27	58	37	-	16
36.26	101.1	71.0	150.5	3.0	0.4	3.0	silty SAND to sandy SILT	120	4.0	18	25	56	37	-	16
36.42	100.5	70.5	174.0	3.8	0.4	3.9	clayy SILT to silty CLAY	115	2.0	35	50	-	-	6.6	15
36.58	103.5	72.5	186.3	4.3	0.4	4.3	clayy SILT to silty CLAY	115	2.0	36	52	-	-	6.8	15
36.75	140.7	98.5	174.6	4.0	0.5	2.9	silty SAND to sandy SILT	120	4.0	25	35	67	39	-	16
36.91	146.8	102.7	147.9	2.7	0.5	1.9	silty SAND to sandy SILT	120	4.0	26	37	68	39	-	16
37.08	140.9	98.4	145.0	2.6	0.5	1.9	silty SAND to sandy SILT	120	4.0	25	35	66	39	-	16
37.24	134.8	94.0	174.9	4.0	0.4	3.0	silty SAND to sandy SILT	120	4.0	23	34	65	39	-	16
37.40	142.8	99.5	201.7	5.3	0.5	3.7	silty SAND to sandy SILT	120	4.0	25	36	67	39	-	16
37.57	217.4	151.3	206.8	5.0	0.6	2.3	silty SAND to sandy SILT	120	4.0	38	54	81	41	-	16
37.73	190.8	132.6	168.9	3.2	0.5	1.7	clean SAND to silty SAND	125	5.0	27	38	76	40	-	16
37.90	155.1	107.7	159.8	3.2	0.5	2.1	silty SAND to sandy SILT	120	4.0	27	39	69	39	-	16
38.06	137.3	95.2	159.1	3.3	0.6	2.5	silty SAND to sandy SILT	120	4.0	24	34	65	39	-	16
38.22	136.4	94.4	172.8	4.0	0.6	3.0	silty SAND to sandy SILT	120	4.0	24	34	65	38	-	16
38.39	126.2	87.3	168.3	3.8	0.5	3.0	silty SAND to sandy SILT	120	4.0	22	32	63	38	-	16
38.55	128.0	88.4	163.3	3.6	0.6	2.8	silty SAND to sandy SILT	120	4.0	22	32	63	38	-	16
38.72	117.8	81.2	166.6	3.7	0.6	3.2	silty SAND to sandy SILT	120	4.0	20	29	60	38	-	16
38.88	68.4	34.4	-	2.9	0.5	4.3	clayy SILT to silty CLAY	115	2.0	17	34	-	-	4.4	15
39.04	36.4	18.3	-	1.3	0.5	3.8	silty CLAY to CLAY	115	1.5	12	24	-	-	2.3	15
39.21	30.0	15.0	-	1.1	0.5	4.1	silty CLAY to CLAY	115	1.5	10	20	-	-	1.9	15
39.37	29.1	14.5	-	1.2	0.5	4.5	silty CLAY to CLAY	115	1.5	10	19	-	-	1.8	15
39.54	27.4	13.6	-	1.0	0.5	3.9	silty CLAY to CLAY	115	1.5	9	18	-	-	1.7	15
39.70	27.6	13.8	-	0.8	0.4	3.0	silty CLAY to CLAY	115	1.5	9	18	-	-	1.7	15
39.86	29.0	14.4	-	0.9	0.4	3.3	silty CLAY to CLAY	115	1.5	10	19	-	-	1.8	15
40.03	28.8	14.3	-	1.0	0.4	3.6	silty CLAY to CLAY	115	1.5	10	19	-	-	1.8	15
40.19	27.2	13.5	-	1.0	0.3	3.8	silty CLAY to CLAY	115	1.5	9	18	-	-	1.7	15
40.36	25.0	12.3	-	0.8	0.3	3.7	silty CLAY to CLAY	115	1.5	8	17	-	-	1.5	15
40.52	21.9	10.8	-	0.7	0.3	3.7	silty CLAY to CLAY	115	1.5	7	15	-	-	1.3	15
40.68	20.2	9.9	-	0.6	0.2	3.3	silty CLAY to CLAY	115	1.5	7	13	-	-	1.2	15
40.85	19.0	9.3	-	0.6	0.2	3.4	silty CLAY to CLAY	115	1.5	6	13	-	-	1.1	15
41.01	19.7	9.7	-	0.6	0.2	3.2	silty CLAY to CLAY	115	1.5	6	13	-	-	1.2	15
41.18	21.0	10.2	-	0.7	0.2	3.6	silty CLAY to CLAY	115	1.5	7	14	-	-	1.3	15
41.34	21.7	10.6	-	0.8	0.1	4.0	silty CLAY to CLAY	115	1.5	7	14	-	-	1.3	15
41.50	22.4	10.9	-	0.7	0.0	3.5	silty CLAY to CLAY	115	1.5	7	15	-	-	1.4	15
41.67	24.2	11.7	-	0.9	0.1	4.3	silty CLAY to CLAY	115	1.5	8	16	-	-	1.5	15
41.83	24.6	11.9	-	0.9	0.0	4.1	silty CLAY to CLAY	115	1.5	8	16	-	-	1.5	15
42.00	22.9	11.1	-	0.8	0.0	4.1	silty CLAY to CLAY	115	1.5	7	15	-	-	1.4	15
42.16	21.7	10.4	-	0.8	0.0	4.4	silty CLAY to CLAY	115	1.5	7	14	-	-	1.3	15
42.32	19.8	9.6	-	0.8	0.0	4.6	silty CLAY to CLAY	115	1.5	6	13	-	-	1.2	15
42.49	20.9	10.1	-	0.4	0.0	2.0	silty CLAY to CLAY	115	1.5	7	14	-	-	1.3	15
42.65	19.8	9.5	-	0.8	0.0	4.4	silty CLAY to CLAY	115	1.5	6	13	-	-	1.2	15

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Project ID: Pacific Materials Lab
Data File: SDF(366).cpt
CPT Date: 1/11/2006 11:22:57 AM
GW During Test: 30 ft

Sounding ID: CPT-03
Project No:
Cone/Rig: DSG0786

Depth ft	qc PS tsf	qc1n PS - *	q1ncs PS - *	Slv Stss tsf	pore prss (psi)	Frct Ratio %	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60% *	SPT R-N 60%	Rel Den % *	Ftn Ang deg *	Und Shr tsf	Nk - *
42.82	38.2	18.3	-	1.9	0.0	5.2	silty CLAY to CLAY	115	1.5	12	25	-	-	2.4	15
42.98	39.3	18.8	-	2.4	0.0	6.6	silty CLAY to CLAY	115	1.5	13	26	-	-	2.5	15
43.15	36.2	17.3	-	2.4	0.0	7.2	silty CLAY to CLAY	115	1.5	12	24	-	-	2.3	15
43.31	54.5	25.9	-	3.1	0.0	5.9	silty CLAY to CLAY	115	1.5	17	36	-	-	3.5	15
43.47	55.8	26.5	-	2.9	0.1	5.4	silty CLAY to CLAY	115	1.5	18	37	-	-	3.6	15
43.64	33.1	15.7	-	2.4	0.0	7.9	silty CLAY to CLAY	115	1.5	10	22	-	-	2.1	15
43.80	37.9	17.9	-	2.5	0.0	7.2	silty CLAY to CLAY	115	1.5	12	25	-	-	2.4	15
43.97	57.2	27.0	-	3.5	0.1	6.3	silty CLAY to CLAY	115	1.5	18	38	-	-	3.7	15
44.13	60.9	28.7	-	4.0	0.1	6.8	silty CLAY to CLAY	115	1.5	19	41	-	-	3.9	15
44.29	44.1	20.7	-	4.2	0.1	9.9	silty CLAY to CLAY	115	1.5	14	29	-	-	2.8	15
44.46	76.9	36.0	-	3.4	0.1	4.6	silty CLAY to CLAY	115	1.5	24	51	-	-	5.0	15
44.62	115.7	76.8	193.3	4.9	0.2	4.3	clayy SILT to silty CLAY	115	2.0	38	58	-	-	7.6	15
44.79	117.7	55.0	-	6.3	0.2	5.5	clayy SILT to silty CLAY	115	2.0	27	59	-	-	7.7	15
44.95	120.9	56.3	-	6.4	0.2	5.4	clayy SILT to silty CLAY	115	2.0	28	60	-	-	7.9	15
45.11	137.2	90.9	209.7	5.8	0.2	4.3	clayy SILT to silty CLAY	115	2.0	45	69	-	-	9.0	15
45.28	132.8	87.9	217.9	6.2	0.2	4.7	clayy SILT to silty CLAY	115	2.0	44	66	-	-	8.7	15
45.44	130.6	86.3	226.8	6.6	0.3	5.1	very stiff fine SOIL	120	2.0	43	65	62	38	-	30
45.61	141.8	93.6	204.6	5.6	0.3	4.0	clayy SILT to silty CLAY	115	2.0	47	71	-	-	9.3	15
45.77	157.3	103.8	203.9	5.6	0.4	3.7	silty SAND to sandy SILT	120	4.0	26	39	68	39	-	16
45.93	157.8	104.0	202.0	5.6	0.4	3.6	silty SAND to sandy SILT	120	4.0	26	39	68	39	-	16
46.10	165.3	108.8	201.0	5.5	0.4	3.4	silty SAND to sandy SILT	120	4.0	27	41	70	39	-	16
46.26	177.3	116.6	188.8	4.8	0.4	2.8	silty SAND to sandy SILT	120	4.0	29	44	72	39	-	16
46.43	180.1	118.3	179.3	4.3	0.4	2.4	silty SAND to sandy SILT	120	4.0	30	45	73	39	-	16
46.59	149.8	98.3	164.4	3.7	0.4	2.5	silty SAND to sandy SILT	120	4.0	25	37	66	38	-	16
46.75	112.0	73.4	172.0	4.0	0.4	3.7	clayy SILT to silty CLAY	115	2.0	37	56	-	-	7.3	15
46.92	68.9	31.3	-	3.6	0.4	5.4	silty CLAY to CLAY	115	1.5	21	46	-	-	4.4	15
47.08	42.2	19.2	-	2.5	0.4	6.4	silty CLAY to CLAY	115	1.5	13	28	-	-	2.7	15
47.25	31.6	14.3	-	1.4	0.4	5.0	silty CLAY to CLAY	115	1.5	10	21	-	-	2.0	15
47.41	28.8	13.0	-	1.1	0.4	4.1	silty CLAY to CLAY	115	1.5	9	19	-	-	1.8	15
47.57	29.2	13.2	-	1.2	0.4	4.4	silty CLAY to CLAY	115	1.5	9	19	-	-	1.8	15
47.74	27.5	12.4	-	1.4	0.4	5.5	silty CLAY to CLAY	115	1.5	8	18	-	-	1.7	15
47.90	31.3	14.1	-	1.7	0.4	6.1	silty CLAY to CLAY	115	1.5	9	21	-	-	1.9	15
48.07	34.6	15.5	-	3.2	0.3	9.9	silty CLAY to CLAY	115	1.5	10	23	-	-	2.2	15
48.23	80.7	36.1	-	5.0	0.3	6.4	silty CLAY to CLAY	115	1.5	24	54	-	-	5.2	15
48.39	153.3	99.5	216.2	6.3	0.4	4.2	very stiff fine SOIL	120	2.0	50	77	67	38	-	30
48.56	188.4	122.1	237.4	7.6	0.4	4.1	very stiff fine SOIL	120	2.0	61	94	74	40	-	30
48.72	152.0	98.4	235.8	7.3	0.3	4.9	very stiff fine SOIL	120	2.0	49	76	66	38	-	30
48.89	85.5	37.9	-	5.3	0.2	6.4	silty CLAY to CLAY	115	1.5	25	57	-	-	5.6	15
49.05	52.4	23.2	-	3.2	0.2	6.5	silty CLAY to CLAY	115	1.5	15	35	-	-	3.3	15
49.22	41.0	18.1	-	1.8	0.3	4.8	silty CLAY to CLAY	115	1.5	12	27	-	-	2.6	15
49.38	34.4	15.2	-	1.2	0.3	4.0	silty CLAY to CLAY	115	1.5	10	23	-	-	2.1	15
49.54	33.2	14.6	-	1.2	0.2	4.0	silty CLAY to CLAY	115	1.5	10	22	-	-	2.1	15
49.71	39.3	17.3	-	1.4	0.3	3.9	silty CLAY to CLAY	115	1.5	12	26	-	-	2.5	15
49.87	44.4	19.5	-	1.6	0.3	3.9	silty CLAY to CLAY	115	1.5	13	30	-	-	2.8	15
50.04	38.4	16.8	-	1.9	0.2	5.3	silty CLAY to CLAY	115	1.5	11	26	-	-	2.4	15
50.20	41.3	18.0	-	3.3	0.2	8.6	silty CLAY to CLAY	115	1.5	12	28	-	-	2.6	15

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